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# MacAddict

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MARCH 2002 NO. 67



Meet the World's  
Greatest  
Computer

Microsoft Office v. X  
Power-user tips and tricks

Upgrade Your iBook  
More power, more speed

Video Special Effects  
Don't be content with reality

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Olympus Camedia D-40  
Formac gallery 1740  
Adobe Illustrator 10  
and much more...







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v. X





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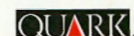




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# When did it start for you?

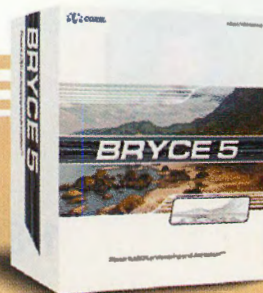


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The new iMac is a stunner, with both groundbreaking design and pro-level power. The newest iApp, iPhoto, completes Apple's digital-hub strategy, and the iBook family gains a 14.1-inch big brother. It's time to max out your Visa card. Again.

by the **MacAddict** editors

The head-bobbingest, eye-poppingest iMac ever.



### 31 Mac Maestro

Electronic musician BT has produced songs for \*NSYNC, remixed tracks for Sarah McLachlan, and composed arrangements for Peter Gabriel. He couldn't do any of it without his trusty Mac.

by **Andrew Tokuda** and **Cathy Lu**

Don't hate me because I have more cool stuff than you.



### 38 Office Tricks

Love it or hate it, there's no denying that Office v. X is the most important program to come out for Mac OS X to date. We show you how to get the most out of this power suite of power apps.

by **Gene Steinberg**



I can see clearly now, the jaggies are gone.



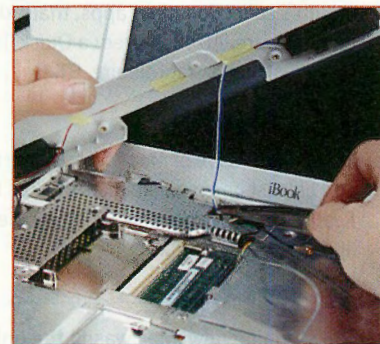
Cover photograph by **Mark Madeo**.

## how to

### 62 Upgrade Your iBook

Apple has upgraded the iBook since its debut, but if you have no plans to buy a new one anytime soon, you can upgrade the one you have. We show you how to ramp up your iBook to not only match Apple's fastest offering, but actually exceed its stock specs.

by **Niko Coucouvanis**



Not for the faint of heart.

### 68 Create Spectacular Movie Effects

Editing digital videos and adding transitions in iMovie is a lot of fun, but you can take your movies to a higher level by creating professional-caliber special effects to complement your footage. If you're curious to know how we created the wild effects in last month's staff video (on this month's Disc as well), get all the gory details here.

by **Andrew Tokuda**



Play with fire without getting burned.

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## every month

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Apple's on the right track—and it feels good.

### 10 The Disc

A 30-day test drive of Microsoft's Office v. X for Mac and a demo of Aspyr's tons-o'-fun Otto Matic game top this month's collection of 46 apps, trials, demos, shareware, and freeware. Also featured: a QuickTime interview with Mac musician extraordinaire, BT.

### 12 Letters

At least one issue of *MacAddict* is safe from bioterrorism, and at least one mall rat takes the bus to get his fix. Readers tell us about sticky issues, devilish brothers, and other Mac dramas.

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What's worse than Nazis? Zombie Nazis. We look at *Return to Castle Wolfenstein*, featuring a nasty villain who tries to kill you with an undead army, and *Sacrifice*, the combo role-playing and strategy game where you do the diabolical to please your god. Read on—if you dare.

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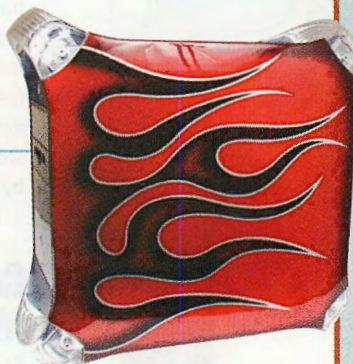
Now that you're comfortable using Mac OS X, you'll want to personalize it with custom icons, custom sounds, and custom startup preferences. We tell you how to make these tweaks, how to speed up your Internet connection, how to create a mini file server, and much more.

### 96 Shut Down

Couldn't make to the San Francisco Mac Expo? Our editors portray some of the characters who stalked the show floor.



We have seen the future, and it's cute.



Graphite's cool, but flames are hot.



Sorry, but mommy told me to just say no.

# MacAddict

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PUBLISHER Don Kimenker  
EDITOR IN CHIEF Rik Myslewski

#### EDITORIAL

MANAGING EDITOR Jenifer Morgan  
EXECUTIVE EDITOR Cathy Lu  
SENIOR EDITORS Kris Fong,  
Narasu Rebbapragada (news)  
ASSOCIATE EDITOR Niko Coucouvanis (reviews)  
CONTRIBUTING EDITORS Raf Anzovin, Steven Anzovin, Joseph O.  
Holmes, Frank O'Connor, Ian Sammis, Andrew Tokuda, Buz Zoller

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#### PRODUCTION

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# editor's note

calm (kām) *adj.* 1. Mac Expo 2002.

It's 2 in the morning on Friday, January 11, and I've just stumbled home from the last full-bore party night of the 2002 San Francisco Mac Expo, the biannual gathering of the Mac community's best and brightest. Tonight I've been deafened by a high-decibel DJ, well lubricated by a generous barkeep, and absolutely, completely, and to-the-bone invigorated by what I've heard from the developers, manufacturers, and other assorted happy warriors who keep this Mac market a-hummin'.

Every Expo—and I've attended all but one since the late 1980s—has had a pervading spirit. Sometimes subtle and sometimes glaringly obvious, each has had a defining mood, be it the panic of Boston '97 or the cranky disappointment of New York '01.

This year, the mood was—how shall I say it?—calm.

Calm. That's a pretty blah word—not a rallying cry, not a high-Q marketing slogan, not a term you'd embellish on a 50-foot billboard. "Join the Mac revolution: It's calm."

But I swear, that's what the people who paid for and staffed the booths at this Expo exuded: calm.

**Apple innovates by filling our needs better than we ever thought our needs could be filled.**

Oh, sure, there was excitement aplenty. The new flat-screen iMac—though expected—caught everyone off guard with its "What the...?" design. (Side note: Can anyone keep a secret better than Steve and Company? After Mr. Jobs retires as Apple CEO, I suggest that then-President Noam Chomsky make him head of the NSA.) Folks were also lit up about iPhoto and the swelling avalanche of OS X apps—including a tantalizing peek at Photoshop for X at the keynote.

But even the excitement was...well, calm. Apple has done so much right in the past couple of years that although the new iMac's design was not what people expected, it was not unexpected. Sound contradictory? Let me explain: We've come to trust Apple again. We trust that



## The old and the new, face to face.

It'll deliver something beyond our expectations, something that'll push the proverbial envelope—and with few exceptions, it delivers.

Perhaps more important, we also trust that Apple won't overdo it. That it won't go full bull-moose zany and bet the farm on some solution in search of a problem.

It hasn't always been this way. Most of you dear readers either have long memories or have been chilled by war stories from battle-scarred Mac veterans. You recall Open Doc, Cyber Dog, Voice Commands, Interapplication Communication, eWorld—and, if I can be a tad heretical in some of your eyes, the Newton, eMate, and QuickTake as well. Those days are gone, my friends—and good riddance.

Some would prefer that Apple lead us, sheeplike, into a world only the gurus of Cupertino can envision, but that's not the kind of innovation today's Apple is focusing on. Apple innovates by filling our needs better than we ever thought our needs could be filled—and that's a smarter way to thrive than by trying to convince us of needs we didn't know we had in the first place.

Today's Apple is run by some freakin' smart people. And when freakin' smart people are in charge, they hire freakin' creative people to create freakin' useful, freakin' *correct* products. These products—OS X, the new iMac, the iBook, the TiBook, the G4 Tower, the iPod, and the many iApps—are inspiring a mood I haven't felt for a while in this turbulent, recession-enduring, tech-stock-crashing, oh-my-god-is-that-a-vial-of-anthrax-in-your-pocket-or-are-you-just-glad-to-see-me millennium.

Calm.—Rik Myslewski

## Staff Rants

### Cathy Lu

#### Lord of the Features

**Q.** What was your first thought when you saw the new iMac?

**A.** I expected it to come alive and start boogying like that weird dancing baby that used to be all over the Web.

**Q.** Apple has images, video, audio, and DVD covered—what's next?

**A.** An all-in-one digital camera, DV camera, MP3 player, PDA, and cell phone the size of an iPod. Is that too much to ask?

### Kris Fong

#### Tutorial Temptress

**Q.** What was your first thought when you saw the new iMac?

**A.** "Hey, you in front! Sit your fat ass down so the rest of us can see!" Once I could see, the iMac reminded me of a Luxo lamp, with a big, flat face and a base that looks like a Hostess Snowball—though not quite as smoochy.

**Q.** Apple has images, video, audio, and DVD covered—what's next?

**A.** The iCamera, iDV Camera, iMixer, and iMate. An iEspresso maker might be a good idea, too, since playing with all this stuff is bound to keep you up all night.

### Narasu Rebbapragada

#### Staff Nosey Parker

**Q.** What was your first thought when you saw the new iMac?

**A.** Great—now I need new furniture and new art to go with this thing. Rik, can I get a raise?

**Q.** Apple has images, video, audio, and DVD covered—what's next?

**A.** I hate to raise the specter of the iWalk, but it is the next logical step.



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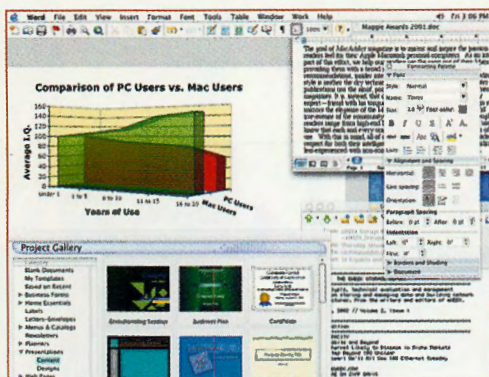
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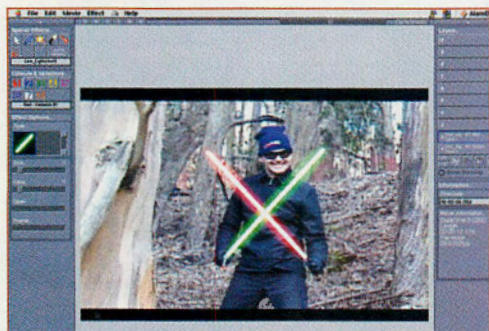
From killer apps to killer tomatoes, this month's Disc is a doozy.



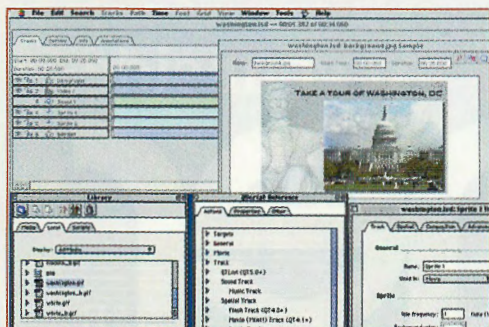
**Office v. X Test Drive:** Word X, Excel X, PowerPoint X, Entourage X—all free for 30 days.



**Otto Matic demo:** No, it's not a scene from *Attack of the Killer Tomatoes*—it's level 1 of Otto Matic.



**AlamDV:** Add panache (or schizophrenia) to your video.



**LiveStage Pro 3 demo:** Interactive QuickTime, baby! LiveStage makes it easy—and fun.

## Office v. X Test Drive

Microsoft takes full advantage of the elegance and beauty of Mac OS X with its release of Office v. X. But don't take our word for it—try it out yourself with the Office v. X Test Drive, which includes Word X, Excel X, PowerPoint X, and Entourage X with 99.9 percent of the full features. And it's all yours for 30 days—free! You'll need Mac OS 10.1 or later—but you have that already, don't you?

## Otto Matic Demo

Four words: This game is *fun*! Whether you're a hard-core gamer or you just dabble in a little fun and games from time to time, you'll quickly become addicted to this game's outright wackiness. From the folks who brought us Bugdom, Otto Matic continues in the same vein. You control a cute robot journeying through some weird sci-fi worlds far, far away, rescuing pokey humans and zapping the baddies.

## AlamDV

If you've got a DV camera and some editing software, you're halfway to Hollywood. Luckily for you, the folks at CSB Digital are giving away their awesome special effects software, AlamDV, to *MacAddict* readers for free—yes, we said *free*! Create realistic gunfire, stage *Star Wars*-esque light-saber duels, and conjure up other laser effects with this easy-to-use app. The software on the Disc is a demo; the read-me tells you how to get your free registration code to unlock the full-fledged product.

## LiveStage Pro 3 Demo

QuickTime authors, rejoice! Totally Hip's LiveStage Pro keeps getting better: Version 3 takes full advantage of QuickTime 5's Media Skins, adding a boatload of new prewired actions so it's easier than ever to make your QuickTime movies interactive. In this demo version, you can't save project files or export movies to play on other machines, but you can have a blast learning how to make interactive QuickTime files.

### Exclusives!

An encore presentation of last month's *Kicks Neck* staff video, plus all the video you need to create its way-cool special effects (see *How to Create Spectacular Movie Effects*, p68) and all the audio you need for BT's *Guide to Remixing* how-to on p35.



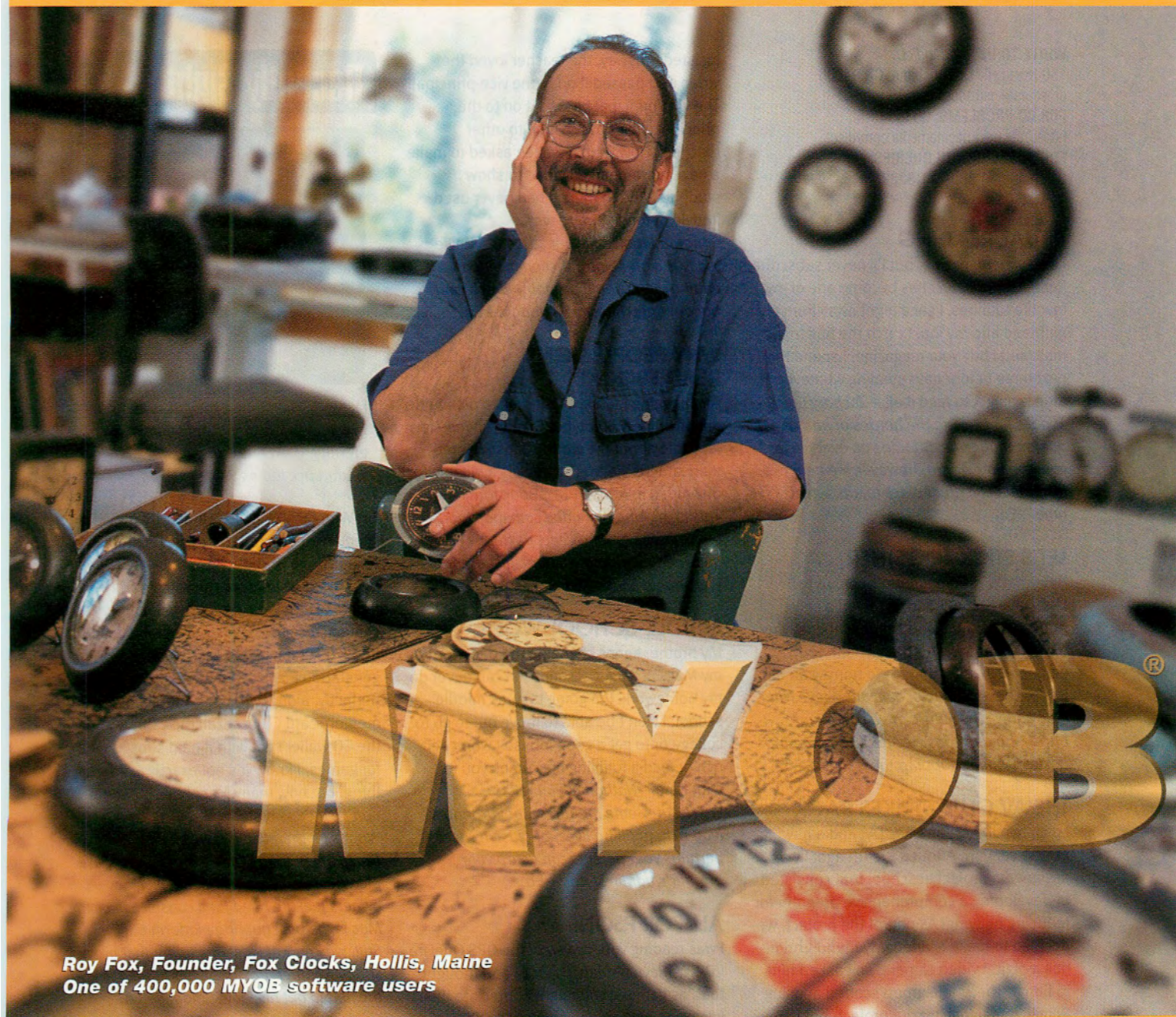
He's talented, he's creative—and the dude be easy on the eyes, too.

This month's video is an interview with BT (aka Brian Transeau)—a mixologist extraordinaire as well as composer, arranger, and collaborator with stars including Peter Gabriel, Tori Amos, Seal, Madonna, and NSYNC (though we forgive him for that particular dalliance). Find out why he thinks a musician with a Mac can do anything.

If you don't receive the Disc with your copy of *MacAddict*, you might want to consider upgrading! Each monthly Disc contains cool demos, useful shareware and freeware, and the inimitable *MacAddict* staff video. To get 12 issues of *MacAddict* that include this value-packed Disc with your subscription (prorated if necessary) for just \$10 more, call 888-771-6222—the operator will take care of everything.



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# Letters

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## RITUAL READING

I love your magazine, but I'll never subscribe. Reading *MacAddict* has become one of my favorite routines. I get a night away from my girlfriend and my job, I catch the bus to the mall, and I buy your magazine. I spend the next three or four days stealing whatever time I can get to read it all.—*Zachary Carey*  
*Thanks for braving the hordes of hair to get our fair magazine. Should you every lose your mall privileges, however, we hear the bathroom is a great place to, uh...steal time.*—Ed.

## LET'S STICK TOGETHER

Hey what's your mailroom been up to? Like Dave Solon, I, too, received a call from another Mac addict subscriber saying my copy was stuck to hers. Thank you, neighbor, and if you want to borrow an old issue, I have all but issue two!—*Steve Nimr*  
*Mac addicts by nature are a congenial bunch, but perhaps we should stop eating baklava while wrapping the issues.*—Ed.

## THE AV CLUB STRIKES BACK

I own two iMacs, an iMac DV, and a new CD-RW version. About a month ago, I was assigned a project at school that consisted of developing a comprehensive program for reducing bullying. As part of the project, we decided to make a video. My friend Chris has a digital video camera, so I asked him to film it. The whole group scoffed at using iMovie and a Mac for our project, but I

insisted. Anyway, the teacher loved the video and passed it on to the vice-principal. The vice-principal passed it on to the principal, who passed it on to other teachers. Now we have been asked to make a new, more-detailed video to show students. And to think, I had never used iMovie before!—*Tim Leaver*  
*Congratulations on your success. iMovie really is a great introduction to video editing. You should probably watch your back in the schoolyard, though.*—Ed.

## WHY PEOPLE DON'T READ EBOOKS

An engaging fantasy that dares to dismantle an inflexible stereotype, *Osama's Violin* is a fairy tale about the world's most-wanted man and his violin. The book is available for download in Adobe PDF eBook format.—*RJ*  
*This is the kind of inane spam that floods our in-boxes and prevents us from answering legitimate letters. Just thought you should know.*—Ed.

## MIDDLE-SCHOOL WOES

My brother keeps changing the password on my Mac OS X user account so I can never do my homework. I'm going to flunk middle school. I won't be able to move out to go to college or to get a good job, so I won't get rich or lead a fulfilling life. Thank you for your time.—*Nathaniel Emmet*  
*We're sure some middle-school dropouts lead rich, fulfilling lives, but just in case, perhaps your parents can usurp your brother's admin status.*—Ed.

## ALL FOR PSONE

I was reading your review of the QPS QueFire CD-RW (*Reviews*, Jan/01, p56) and thought that, as gamers, you might appreciate this: Last year, my company bought a QPS

## Recently Sighted



I keep my issue-one copy of *MacAddict* in a vacuum jar, safe and sound for all eternity. Even Anthrax can't get her.  
—*Laurence James Stock*

FireWire CD-RW, which came with a "genuine leatherette" satchel for mobility. As this drive is about as mobile as the great pyramids, we shelved the satchel. Three months later, we were spring-cleaning, and I came across the bag. I took it home to try to find a use for it, and guess what? A second generation PlayStation PSone fits inside perfectly, along with two controllers, a memory-card CD case, all the cables, and the CD wallet I got with a paid subscription for games. I know it's not exactly a Mac thing, but how many Macphiles out there don't own a PlayStation?—*Rich Howard*  
*What's leatherette? Is it warm, like in the Grace Jones song? Or is it more elastic, like pleather? We'd argue that not all Mac owners feel the need for a console, since the Mac is the best gaming platform out there. Still, we know at least one editor that braved soggy weather and long lines to be one of the first to get his PlayStation 2.*—Ed.

## OF CLOSED MIND AND WALLET

I don't play computer games. Please don't count the January 2002 issue in the twelve-issue subscription I paid for. There is absolutely nothing for me or many other subscribers!—*Lee Hall*  
*That's what Ebenezer Scrooge said about Christmas, and look what happened to him. Seriously though, try a few demos on the Disc (when no one's looking, of course). You might just enjoy yourself.*—Ed.

## You Know You're a Mac Addict When...


...you open up ResEdit when you realize you're not going to meet your New Year's resolutions.—*Ben Sisley*

...you're up at 4 a.m. with a dictionary and a baby-name book because iTunes prompted you to name your iPod.—*Dave Siederer*

...all the clerks at the Apple Store know your zip code.—*Jay Kangel*

...as you type, you inadvertently capitalize the second letter of every word beginning with "i."—*Jae Moreland*





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**“***When I think back to all those late nights at the agency, brainstorming, putting out one fire after the next, my head starts to hurt. It was me, my Mac® and my five-by-nine cell...I mean office. My Zip® drive finally sprung me. Now, I can save all my jobs on a few Zip disks, stick 'em in a bag and take my work home. Best gift I ever gave myself. And for maximum security, QuikSync™ software gives me on-the-fly backup. Ahh, sweet freedom!* **”**

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Free software titles with  
ActiveDisk™ technology  
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# get info

The news of the month in bite-size chunks.

## The Sights and Sounds of Mac Expo 2002

The San Francisco Mac Fest Reveals Cool New Toys

**“W**hat makes the Mac so cool is those third-party guys,” says Sinbad, the stand-up comic and TV funny man. We caught him browsing the show floor at Mac Expo 2002. He’s not joking this time. More than 300 Mac software and hardware companies filled two grand halls in San Francisco’s Moscone Center, showing off new products, new technologies, and cool new Mac OS X interfaces. —NR

### Hardware That Stole the Show

Apple’s new iMac isn’t the only hardware that went on a diet. Minolta ([www.minoltausa.com](http://www.minoltausa.com)) unveiled the new **DiMage X digital camera** with a 3X optical zoom. The lens in this 2-megapixel beauty never extends from the camera body, keeping it at about 3/4 inch thick. The DiMage X should be available by the time you read this for \$499.

Storage is getting sexier with Dimension 5’s **X-MeM FireWire and USB storage devices**. The removable 20GB and 30GB blue-and-silver disks fit into a base, whose interface you can swap between USB 1.x and FireWire. CompuCable ([www.compuCable.com/x-mem](http://www.compuCable.com/x-mem)), which is distributing the X-MeM, expects the 20GB base-and-drive combo to sell for about \$290 some time in Q1 2002.

We love little devices, and WiebeTech Micro Storage Solutions ([www.wiebetech.com](http://www.wiebetech.com)) came through with the **FireWire Keychain**, a portable flash drive that stores 64MB to 1GB of information. WiebeTech had

not announced pricing or availability as of press time, but you can expect the 1GB model will be expensive.

This is the hippest accessory we found on the show floor. **AppleSkinz** ([www.appleskinz.com](http://www.appleskinz.com)) decorates your G3 or G4 with airbrushed or silk-screened designs mounted on scratch-resistant plastic, which you mount to the exterior of your tower. A pair costs about \$70, and we noticed flames, flags, and custom logos, but alas, no Blue Dalmatian or Flower Power patterns.

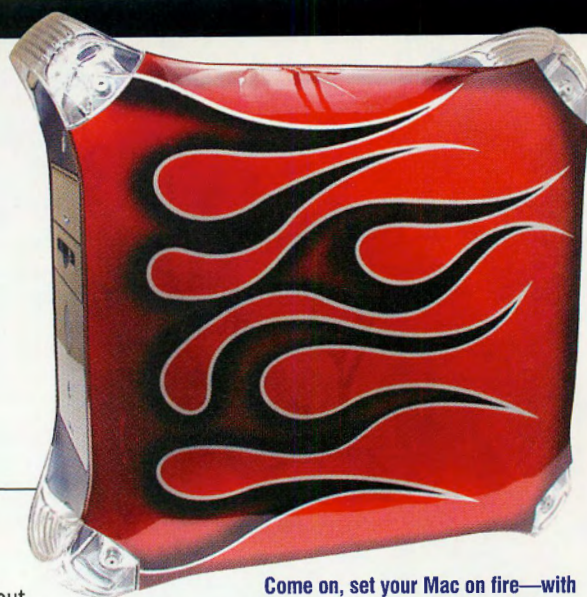
Hopefully, Griffin ([www.griffintechology.com](http://www.griffintechology.com)) can pull this one off. Those brainy hacks from Memphis wowed audiences with a fully working prototype of the **PodMate**, a translucent device that turns your iPod into a remote control. Griffin wouldn’t tell us how it managed this trick, but the company did say it was waiting for Apple’s blessing before going forward with a commercial version. Pray to the gadget gods that this one comes to fruition.

### Graphic Goodness

Adobe Systems ([www.adobe.com](http://www.adobe.com)) rode the coattails of Apple’s keynote address with a few Mac OS X announcements of its own.



The X-MeM looks like a Tiffany paperweight, but it works like a 20GB to 30GB FireWire and USB storage system.



Come on, set your Mac on fire—with AppleSkinz panels for G3s and G4s.

The graphics behemoth tantalized keynote attendees with a preview version of **Photoshop 6 for Mac OS X** and said simply that the product would be available soon. More concretely, Adobe produced a shipping version of **After Effects 5.5**, featuring native support for Mac OS X, new effects, advanced 3D tools, and better masking. Adobe also announced **LiveMotion 2.0**, its Web graphics and Flash animation tool for Mac OS 9 and Mac OS X (expected to ship in Q1 2002 for \$399), and Web-authoring app **GoLive 6.0** for Mac OS 9 and Mac OS X (expected to ship in Q1 2002 for \$399).



We’re hoping Apple doesn’t checkmate Griffin’s PodMate, a fully working prototype that turns your iPod into a remote control.

### Video Goes Mac OS X

Discreet ([www.discreet.com](http://www.discreet.com)), a division of Autodesk ([www3.autodesk.com](http://www3.autodesk.com)), announced **Cleaner 5.1** for Mac OS X. Discreet recently acquired this Web-video software from Media 100 ([www.media100.com](http://www.media100.com)). This version features updated codecs



We be droolin’ over WiebeTech’s Keychain FireWire flash drive.

## The Icon Hall of Fame

The application icon was born as a mere tool for identifying a particular piece of software. This tiny pixelated image has since grown up, blossoming into an artistic expression of an application’s very being. We looked back through our floppies, hard drives, and CDs to see how our favorite icons have evolved into tiny works of art, how Mac OS X has further sweetened their look, and what icons say about the applications they represent.



MacPaint 2.0, 1991



Marathon, 1994



such as Sorenson Video 3 Professional, and it will be available for \$599 in early 2002. Discreet also announced version 2 of its 3D-compositing and vector-based painting app, **Combustion**. The new version will offer 16-bit color, a new Schematic view, and a new text-animation module. It should be available by the time you read this for \$3,495.

Freed from its Web-software duties, Media 100 kicked out version 8 of its Media 100i software/hardware professional video-editing product, with an interface completely redesigned just for Mac OS X. **Media 100i v8** comes with 24 tracks of audio (up from 8), a new master audio track, and support for reverb and dynamics processing effects. On the video side, Media 100i v8 seamlessly exports composites to Adobe After Effects and can handle more graphic layers than the previous version. It will be available in summer 2002 starting at \$2,995.

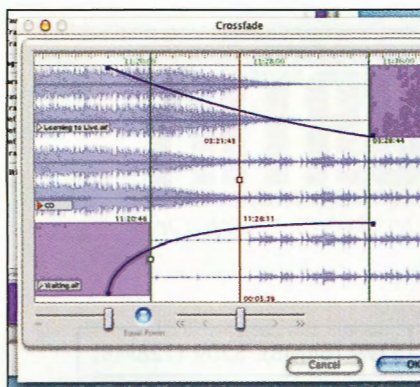


**Media 100's new Aquafied interface puts pro video editing tools in an easy-access panel.**

### Productivity Apps

Dantz (www.dantz.com) distributed a long-awaited preview version of **Retrospect 5.0** for OS X. This beta version does not have full device compatibility, although the final version (available in March or April 2002) will. Version 5.0 will also let users back up files larger than 2GB in size. When explaining why it took so long to unveil a Mac OS X version of its popular data-backup software, Dantz said it couldn't finish its port until Apple had released Mac OS 10.1.2. Dantz has not announced pricing, but plans to ship Retrospect 5.0 for Mac OS 9 and Mac OS X at the end of Q1 2002.

Roxio (www.roxio.com), formerly the software arm of Adaptec (www.adaptec.com), jumped on the Mac OS X bandwagon with a Mac OS X updater for **Toast 5 Titanium**,

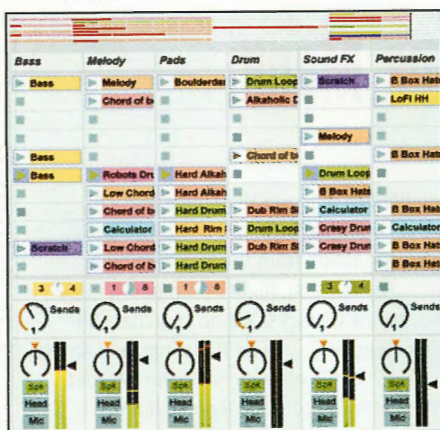


**How sweet it is. Jam for Mac OS X lets you graphically add cross-fades to your burned CDs.**

free to those who already own this version of the popular CD-burning software. Even sweeter was the news that Roxio was adding a new version of Jam to Toast. **Jam**, a CD- and DVD-recording package with audio-CD-mastering features, now includes 24-bit audio and waveform-based cross-fading. The Toast-with-Jam OS X bundle will be available for \$199 in March 2002.

### Audio

Berlin, Germany-based Ableton (www.ableton.com) lets you play DJ from your Mac with **Live** for Mac OS X, a new audio sequencer designed specifically for live performances. You use hot-key combinations or the graphic interface to trigger samples and loops instantly on your hard disk. Live can stretch and compress audio files to keep to your beat, and you can record and edit the jams you like. Live is available now for \$299.95.



**With keyboard controls and a simple one-window interface, Live lets you DJ right from your Mac.**

## Other Expo Notes

### A Cheaper Office

Through a rebate program good through the end of March 2002, buy any Macintosh computer plus Microsoft Office for Mac v. X (\$499, www.microsoft.com/mac) and get \$150 back. Buy any Mac plus an Office v. X upgrade and get \$75 back. Buy a copy of Mac OS X plus Office v. X and get \$50 back. And you can try before you buy with Test Drive, a 30-day demo available on this month's Disc (or from Microsoft's Web site).

### DeBabelizer Goes X

Equilibrium Software showed off DeBabelizer Pro 5 for Mac OS X (\$469, www.equilibrium.com), a software package for optimizing and batch-processing images.

### Strata 3D Goes Flash

Strata has made an addition to Strata3D Pro 3.6 (\$895, www.strata.com)—the ability to export 3D Strata graphics to the 2D Flash format. Strata licensed Electric Image's Ravix II technology to create the Flash renderer.



**This beefy 3D clown is now 2D, thanks to the Flash renderer in Strata3D Pro 3.6.**

### OCR with Oomph

Optical character recognition (OCR) comes to Mac OS X with ScanSoft's OmniPage Pro X (\$149, www.scansoft.com). This new version now converts PDF files into searchable Microsoft Office documents while retaining the original document's formatting and layout.

### Freeway X

SoftPress Systems Limited showed off the beta version of its Freeway 3.1 (\$249, www.softpress.com) for Mac OS X Web-authoring application. The final product should be available by the time you read this.



**SoftPress races Adobe to bring Web authoring to Mac OS X.**

### Adobe Photoshop

The eyes of Photoshop have watched this application grow into the granddaddy of image editors.



Photoshop 2.0, 1991



Photoshop 6.0, 2000

### Microsoft Word

This little word processor is evolving into not-so-little page-layout software for the masses.



Word 5.1, 1992



Word 2001, 2000



Word X, 2001



get info

# droolWORTHY

*Sexy Stuff We Can't Wait to Get Our Mitts On*

## MPIO-DMK

Digital Global Network	<a href="http://www.mpio.com">www.mpio.com</a>	\$179 (64MB), \$209 (128MB)
------------------------	--	-----------------------------

**T**his product's indecipherable name fails to convey the awe we felt at holding an MP3 player that was not much longer than our petite fingers. Digital Global Networks' 64MB and 128MB players come with a voice recorder, a backlit LCD, and a USB interface for uploading MP3 tracks from the company's proprietary software. Digital Global Networks says a hardware add-on for turning this tiny gadget into a digital camera will be available in early 2002. You may find yourself inspired to turn to some James Bond-style espionage. —Narasu Rebbapragada



The MPIO-DMK is the only MP3 player that fits into the lipstick case we all know you have.

PHOTOGRAPH BY W. B. JONES

## CRW70 Spyder

Yamaha	<a href="http://www.yamaha.com">www.yamaha.com</a>	\$299.99
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**T**he slick, portable Spyder CD-RW is swift at 12X write/8X rewrite/24X read speeds, and slender at just 1 inch thick. Its SafeBurn Buffer Management lets you burn CDs while running apps in the background, and if you're not in the mood to burn, you can listen to your audio and MP3 CDs. The Spyder interface is speedy USB 2.0, and you need to install the included driver software in Mac OS X. If you don't already have a USB 2.0 PCI card, Yamaha will send you one free as part of a mail-in promotion. —Whitney Hess

The Spyder gets its name from its sporty car-style flip lid.



PHOTOGRAPH COURTESY OF YAMAHA

## Shareware Pick of the Month

**Watson**

PRICE: \$29

URL: [www.karelia.com/watson](http://www.karelia.com/watson)



Find Watson 1.0.3 on the Disc.

**W**e surf the Web all day long, so we were delighted to discover Watson, a Mac OS X-only app that shares Sherlock's shape, size, and neat little row of icons but performs a whole different trick. Watson scoops up information from the Web in nine categories: movie schedules (including QuickTime movie trailers), flight information, eBay auctions, currency exchange rates, phone numbers, recipes, stocks, Yahoo searches, ZIP codes, and image searches. Karelia promises more categories, such as TV listings and street maps. While all of the info Watson retrieves for you is available elsewhere on the Internet, Watson hands it over faster and easier than your Web browser can. —Joseph O. Holmes

Finding local movie times is elementary with Watson.



## The Icon Hall of Fame

### Netscape

Like Adobe Photoshop, Netscape polished its handsome icon but left the design much the same. But while Photoshop grew into an image-editing behemoth, Netscape lost its market dominance. Icons can't ward off competitors, but at least they fight in style.



Netscape 1.0, 1994



Netscape 4.61, 1999



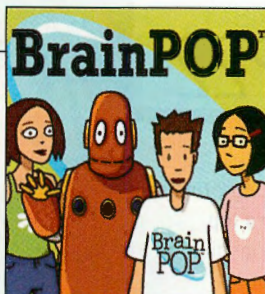
Netscape 6.2.1, 2001



# Creating Fun Educational Web Sites for Kids

*Brainpop.com's Creators Break It Down into Four Easy Steps*

**B**rainPop.com has bubble-gum colors, animated cartoon kids, and a talking mouse. It also answers the question "What is anthrax?" This educational Web site uses cartoon characters and Flash animation to educate kids about science, technology, and health issues at a fifth-to-eighth-grade level. Kids are responding, sending the site more than 500 emails a day. BrainPop's masterminds shared their secrets on creating educational Web sites for kids. It's easier than you might think.—NR



**BrainPop characters Cassie, Moby, Tim, and Rita star in short Flash-animated movies that educate kids on health, science, and technology.**

## Create Kid-Friendly Characters

"Having characters that speak in a language kids relate to is a huge thing," says Lisa Ebersole, content director of BrainPop.com. The site employs a cast of seven demographically diverse characters, like Tim and his sidekick Moby, or the father-and-son duo of Gary and Gary. BrainPop uses Adobe Photoshop and Macromedia Flash to animate its characters, but you don't have to rely on professional-level programs to produce fun graphics. And if you're not the artistic type, Ebersole suggests, "Have the kids create the characters."

## Keep Navigation Simple

The site's navigation system should be a no-brainer. BrainPop's home page has three giant buttons—Health Movies, Science Movies, and Technology Movies—that point kids to the three categories of topics about which they can view movies.

## Incorporate Short Movies

BrainPop's site revolves around short, 3-to-5-minute, Flash-animated files that are about 250K in size and take no more than 90 seconds to download on a 56-Kbps modem. Since that can seem like an eternity for a child, BrainPop has Flash-created quizzes that pop up during download.

## Make It Fun

Every topic has several different activities. Along with BrainPop's educational movie on dinosaurs, Bob the former lab rat walks through an experiment on identifying bones, and Gary and Gary tell kids the best places to find fossils.

For more information on Web design from BrainPop and nine other design teams, check out *Adobe Master Class: Web Site Redesigns* by Darcy Dinucci (Adobe Press, \$40).

**BrainPop's site is energetic yet easy to navigate.**



# new STUFF

## Acrobat 5.0.5

Adobe, [www.adobe.com](http://www.adobe.com), free

This free download partially Carbonizes Acrobat 5 for Mac OS X and gives you macro buttons for one-click PDF creation in Microsoft Office (in Classic mode only).

## CinéWave RT

Pinnacle Systems, [www.pinnaclesys.com](http://www.pinnaclesys.com), \$2,495 (upgrade)

CinéWave RT offers real-time editing and compositing of uncompressed standard definition (SD) video. This professional-level software is available now as an upgrade to an existing CinéWave/Final Cut Pro system.

## ConceptDraw Medical

CS-Odesa, [www.conceptdraw.com](http://www.conceptdraw.com), \$249

ConceptDraw Medical comes with more than 120 libraries and 3000 objects for drawing medical diagrams. Classic and Carbon versions of ConceptDraw Medical are available now.

## ViaVoice for Mac OS X

IBM, [www.viavoice.com](http://www.viavoice.com), \$145.35

Now when you talk, IBM's voice recognition software types natively on Mac OS X. ViaVoice for Mac OS X is available now.

## SparkLE for Mac OS X

TC Works, [www.tcworks.de](http://www.tcworks.de), \$19.95 (\$49 to include MP3 encoding)

This real-time audio editing and authoring application is now available for Mac OS X.

## SynchronEyes 2.0

Smart Technologies, [www.synchroneyes.com](http://www.synchroneyes.com), \$999

SynchronEyes uses TCP/IP to network up to 40 Macintosh workstations in academic computer labs. SynchronEyes 2.0 is available now for Mac OS 8.6 to 9.x.

## Virtual PC 5.0

Connectix, [www.connectix.com](http://www.connectix.com), \$99 (DOS) and \$199 (Windows 98)

Connectix has added Windows XP support, DVD-ROM data support, and Virtual Switch for better networking to its PC-emulation software. Virtual PC 5.0 is available now for Mac OS 9 and Mac OS X.

## Universe 4.0

Electric Image, [www.electricimage.com](http://www.electricimage.com), \$995.00

Electric Image adds new character animation tools, OpenGL preview window, new modeler features, and motion blur preview to this professional 3D application. Universe 4.0 is available now in Carbon and Classic versions.

## Deneba Canvas

Deneba's all-in-one graphics app forges ahead, and so does its icon.



Canvas 3, 1994



Canvas 8, 2001

## Microsoft Excel

Whoever thought you could express yourself with a spreadsheet? Apparently, Microsoft did, and so did its icon.



Excel 4.0, 1992



Excel 2001, 2000



Excel X, 2001



# INtheSTUDIO with P22

## Designing Type Can Be Deadly

**P**22's artful type design has graced the pages of the *New York Times*, *Rolling Stone*, and *Playboy*. While P22 designs for today's top publications, the Buffalo, New York–based design firm draws inspiration from yesterday's artists, including nineteenth-century Mexican printmaker J. G. Posada, whose hand-carved wood type and "Day of the Dead" illustrations provided the basis for the Posada typeface. We talked to P22 type designers Richard Kegler and James Grieshaber about the meticulous process of turning art into type.—NR

### The Man Behind the Type

Mexican artist and political cartoonist José Guadalupe Posada (1852 to 1913) illustrated a slew of Mexican newspapers, but he's most famous for a series of *calaveras* (skeletal images) he drew for the Day of the Dead, Mexico's annual November 2 celebration of the ancestors. P22 wanted to design a typeface that resembled the sensationalist type in Posada's drawings. (Posada is credited with both the illustration and the lettering.) The designers created a basic set of letters (Posada Regular), a more offbeat variation (Posada Irregular), and a collection of symbols (Posada Extras).

### Drawing the Letters

When designing Posada Regular, designer James Grieshaber had few samples of J. G. Posada's work to draw upon—only 12 to 20 roman characters he found in publications and broadsides. Grieshaber painstakingly drew each letter in Macromedia FreeHand 7, then extrapolated that handful into a typeface with more than 200 characters. He then subtly modified the regular set to create a playful set of irregular letters. "The irregular stems stick up above the cap height and

below the baseline," says Grieshaber, adding that the hand-rendered feel of Irregular better reflects J. G. Posada's style.

### The Fun Is in the Fixing

After perfecting the characters in FreeHand, Grieshaber cut and pasted them into FontLab 3.1, where he adjusted the spacing around individual characters and fine-tuned the spacing in certain pairs of letters (called *kerneled pairs*). He tested Posada's kerning using a file of 100 common words (such as the word *awkward*), tweaking the spacing until it satisfied his discerning eye.

Next, Grieshaber generated fonts in Macintosh TrueType, Macintosh PostScript, Windows TrueType, and Windows PostScript formats and tested the fonts for bugs. Designer Christina Torre then created .swf files of each font so that users could try them out on the Flash-enabled TypeCaster portion of P22's Web site.

### Control Points of Death

P22 also created Posada Extras, symbols based on Posada's skeletons and other human caricatures. Kegler first scanned examples of the engravings into Photoshop

as grayscale images, then converted the images into black-and-white bitmap mode. After cleaning up extraneous black dots, he brightened the images using Photoshop's Brightness/Contrast feature. He then exported the extras to Adobe Streamline, a utility that converts scanned black-and-white images into editable Adobe PostScript line art.

The sheer number of lines and curves in that line art challenged the font-creation software. While simple letters like *A* and *O* typically have 8 Bézier control points, the raw scan of a Posada extra contained up to 1,000. Kegler used FreeHand 7 to simplify the curves and paths, and whittled down those points to under 400. "Getting rid of points simplified [the image] to the point where PostScript and Truetype could handle the information," Kegler explains. He crafted the extra font in Macromedia Fontographer, whose interface he prefers to FontLab's.

Two months later, after rigorous beta testing on multiple systems and platforms, P22 debuted the Posada typeface on its International House of Fonts site ([www.internationalhouseoffonts.com](http://www.internationalhouseoffonts.com)). For info on P22's other typefaces, visit [www.p22.com](http://www.p22.com).



Left to right: James Grieshaber, Christina Torre, and Richard Kegler use the Mac to design P22's art-inspired typefaces.

PHOTOGRAPHY COURTESY OF P22



P22 designed these skeletons as extras for the Posada typeface.

# JIM JIM

Grieshaber gently tweaked the Posada Regular font (left) to create the playful Posada Irregular font (right).

## Tools for Typographers

- FreeHand 7 (Macromedia, [www.macromedia.com](http://www.macromedia.com), \$399 for version 10)
- FontLab 3.1 (FontLab, [www.fontlab.com](http://www.fontlab.com), \$399)
- Fontographer (Macromedia, [www.macromedia.com](http://www.macromedia.com), \$349)
- Adobe Streamline 4.0 (Adobe, [www.adobe.com](http://www.adobe.com), \$122)
- Adobe Photoshop 6.0 (Adobe, [www.adobe.com](http://www.adobe.com), \$609)

## The Icon Hall of Fame

### Maxis SimCity

The grandfather of the modern Sim game, SimCity grew from a bustling black-and-white city into a modern-day, 3D metropolis. But as the game (and its icon) changed, its popularity waned. Sometimes it's best to keep things simple.



SimCity 1.4, 1992



SimCity 2000, 1995



SimCity 3000, 1999



The highly-anticipated prequel to the award-winning myth series

# MYTH III

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Conquer 25 single-player maps as you live an epic tale of heroism and battle



Blood & Gore  
Violence



Mumbo  
Jumbo



INFOGRAMES

MacSoft®

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# scrapbook

Learn what's on the inside without voiding your warranty.

## Scanning the Scanner

by Narasu Rebbapragada

**D**on't judge a scanner by what's written on its packaging. We talked to Bob G. Gann, Ph.D., master engineer at Hewlett Packard and author of the book *Desktop Scanners: Image*

*Quality Evaluation*, and Daniel Oey, product manager at Epson, to find out what's inside a consumer flatbed scanner, how a scanner works, and what to consider when buying one.

### Glass Plate

The glass plate lies between your document and the mechanical guts of the scanner.

### The Carriage

The carriage houses the scanner's imaging equipment. It glides down the length of the glass plate to scan the document resting facedown on the glass. The carriage's imaging equipment processes the document one horizontal strip (called a *raster line*) at a time.

### Mirrors

A series of 4 to 5 mirrors reflects the light from the scanned image through the lens (see right) into the CCD (see below). The mirrors serve to fold the optical path to fit into a smaller area. Without mirrors, the carriage would need to be three feet long.

### The Lens

The lens focuses information from the scanned page onto the CCD (see below).

**Tip:** A glass lens constructed with several pieces of stacked glass is the best way to get high quality scans. Glass lenses are better, though more expensive, than plastic lenses. If you're comparing a few scanners that scan at equal resolutions and one of them is significantly cheaper, chances are it has a lower-quality lens.



### Cold Cathode Fluorescent Lamp

Resting on the carriage's (see above) casing, this low-wattage lamp lights up the image you're scanning.



### Analog-to-Digital Converter

On the CCD (see right), all the image data is analog. The analog-to-digital converter transfers it to a digital signal, giving each pixel a red, blue, or green value that your computer can understand. The analog-to-digital converter determines a scanner's bit depth. The higher the bit depth, the more colors you'll get. A 24-bit scanner can capture 16 million colors, whereas a 48-bit scanner can capture 281 trillion colors.

**Tip:** Make sure the bit depth advertised on the box is actually derived from the hardware and not from software interpolation.

### The Charged Coupled Device (CCD)

The CCD converts light reflected off the document (on the glass plate) into an analog voltage. This conversion occurs through an array of pixels, the number of which determines the scanner's resolution, or dpi. Since the light reflected off the document is colored, the CCD has three sensors (red, green, and blue) to process that light.

**Tip:** Buy a scanner based on its hardware, not software interpolation, which simply attempts to increase the resolution of a scan by sampling and multiplying the pixels of the scanned image.



### The Interface

The interface transfers the image data to your computer via FireWire, SCSI, USB1.x, or USB 2.0.

**Tip:** If you're only scanning low-resolution graphics and text, don't waste money on a FireWire or SCSI scanner. At low resolutions, the speed of the scanner, not the interface, determines the scan time. An 8-by-10 inch image scanned at 200 dpi, for example, will scan just as fast with a USB 1.x interface as with a FireWire interface, all other things being equal.



# TAKE THE DATA AND RUN!



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# Think very



PHOTOGRAPH BY MARK MACEDO



# Different.

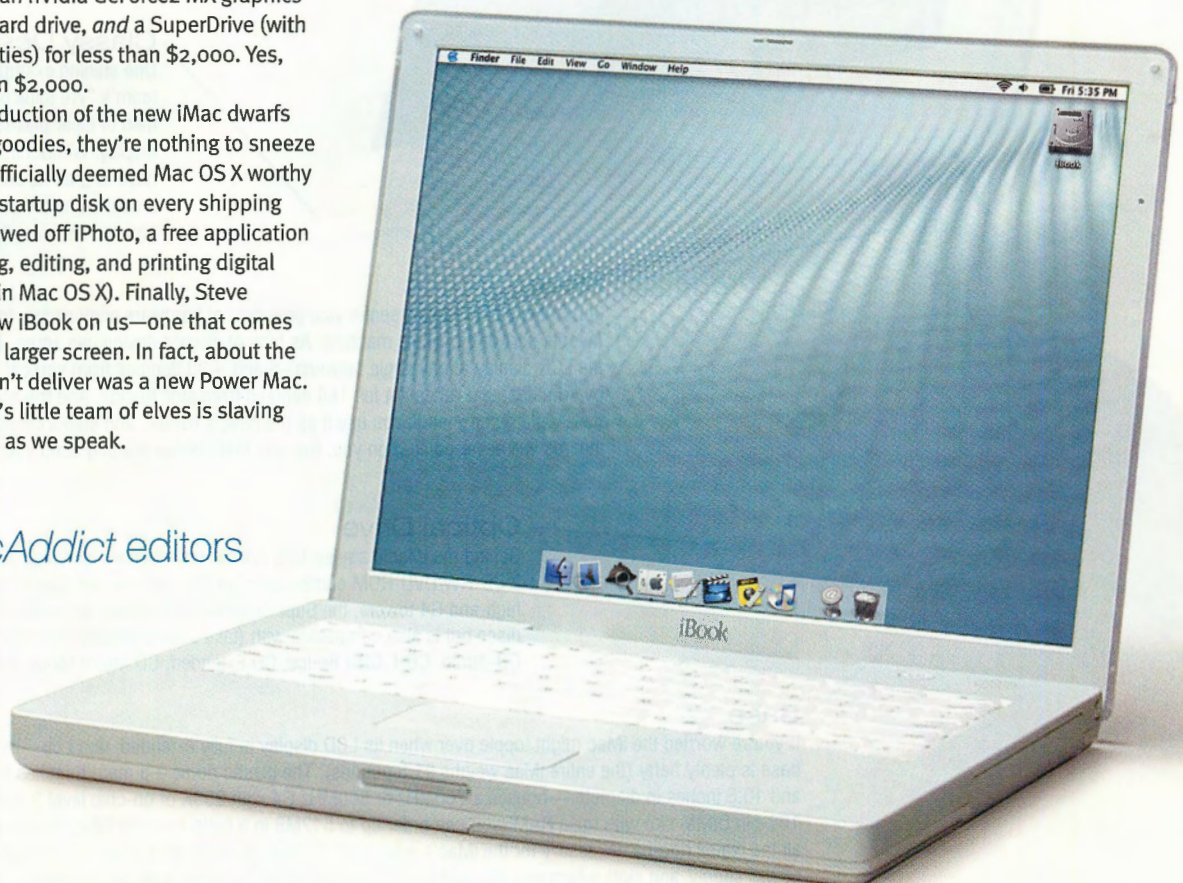
Three days before Mac Expo started, Apple posted this teaser on its Web page: "To go where no PC has gone before." Although many people criticized the company for overhyping its Expo announcements, there was nothing overblown about that statement. Love it or hate it, there's no denying that Apple's new all-in-one computer—the fully redesigned iMac—has brought together simplicity, functionality, elegance, power, and individuality in a way no personal computer ever has before.

"This is the best thing I think we've ever done," said Steve Jobs, a man given to hyperbole, in his Expo keynote. It's certainly one of the most *original* things Apple has done. The iMac, now featuring a flat-screen display that appears to levitate in the air, may look different from any other computer we've ever seen, but it's more than just eye candy—it deftly combines form, practicality, affordability, and power. To wit: The top-end iMac comes with an 800MHz G4 processor, a 15-inch LCD display, an nVidia GeForce2 MX graphics processor, a 60GB hard drive, and a SuperDrive (with DVD-R write capabilities) for less than \$2,000. Yes, folks, that's *less* than \$2,000.

Though the introduction of the new iMac dwarfs Apple's other Expo goodies, they're nothing to sneeze at. First, Apple has officially deemed Mac OS X worthy of being the default startup disk on every shipping Mac. Apple also showed off iPhoto, a free application for importing, sorting, editing, and printing digital photos (it runs only in Mac OS X). Finally, Steve dropped a brand-new iBook on us—one that comes with a very welcome larger screen. In fact, about the only thing Apple didn't deliver was a new Power Mac. But we expect Steve's little team of elves is slaving away on that project as we speak.

by the *MacAddict* editors

A new and amazing iMac.  
A bigger and better iBook.  
The innovative and elegant  
iPhoto. Apple proves  
once again that it does  
computers better than  
anyone on this planet.





# iMac

And you thought the first iMac was revolutionary

As the new iMac ascended, spotlighted, from beneath the keynote stage at Mac Expo, the assembled multitude let out a collective gasp. What the hell was that weird apparition? A giant Hostess Snowball topped by an LCD display? The second coming of Luxo Jr.? Elroy Jetson's game console? It couldn't be the long-awaited successor to the endearing lil' iMac that 6 million happy owners have welcomed into their homes, could it?

Yup—it could be, and it is. And it's every bit as revolutionary as the Bondi Blue cutie Apple introduced three and a half years ago.

The new iMac represents a whole new paradigm in computer design. Will it have the far-reaching influence of its predecessor? Only time will tell—but the smart money is on a big yes.

## Display

In his keynote address, Steve declared the CRT display "officially dead." Well, the iMac's bright, crisp 15-inch LCD display may indeed pound the final nails into the CRT's coffin. The 1,024-by-768 all-digital display, which incidentally also houses a built-in microphone, uses a TFT (thin film transistor) panel with comfortable 120-degree horizontal and 90-degree vertical viewing angles. It's far brighter than most CRTs, and its pixel-response time is plenty snappy enough for video. And since the display uses all of its real estate for image display, the viewable area of a 15-inch LCD is about equal to that of a 17-inch CRT (a CRT monitor's measure is its tube size). Uh, remember CRTs?

## Classy Design Details

One shining example of the Apple design team's "We think of everything" credo is the halo of clear plastic surrounding the LCD display. Without it, to move the display you'd have to grab its surface—not to mention that a colored halo would make the display look smaller. Besides, the clear one is *cool*.

## Neck

Jon Rubenstein, Apple's senior vice president of hardware engineering, told us the iMac's neck is his favorite part of the whole machine. As fans of elegant design, we agree. The neck allows you to tilt the LCD display at any angle between -5 and +30 degrees from vertical, raise and lower the display by 7 inches, and rotate it a full 180 degrees from side to side. And the neck is sturdy—so much so that Apple recommends you use it as the iMac's handle, and states confidently that its patented innards will never go limp on you, the way that cheesy drafting lamp you had in college did.

## Optical Drive

Behind the iMac's smiley-face optical-drive access door lies your choice of a CD-RW drive, a CD-RW/DVD-ROM combo drive, or the aptly named SuperDrive. Formerly found only in high-end G4 towers, the SuperDrive not only reads and writes CD-R, CD-RW, and DVD-R discs but is also compatible with (take a deep breath) DVD-Video, DVD-ROM, CD-ROM, CD-Audio, CD-I, CD-I Bridge, CD Extended, CD Mixed Mode, and Photo CD media.

## Base

If you're worried the iMac might topple over when its LCD display is fully extended, don't be—its base is plenty hefty (the entire iMac weighs 21.5 pounds). The plastic dome—a mere 6 inches tall and 10.6 inches in diameter—houses a 700MHz or 800MHz G4 with 256K of on-chip level 2 cache, a 168-pin DIMM slot with main RAM (you can order up to 512MB in a build-to-order iMac from Apple), all the digital hoo-ha necessary for the iMac's robust I/O, a 40GB or 60GB hard drive, a 130-watt power supply, and slots where you can add more RAM and an AirPort card. Last but not least: Every iMac now ships with an nVidia GeForce2 MX graphics processor with 32MB of DDR (Double Data Rate) video RAM—the same GPU inside the G4 tower.

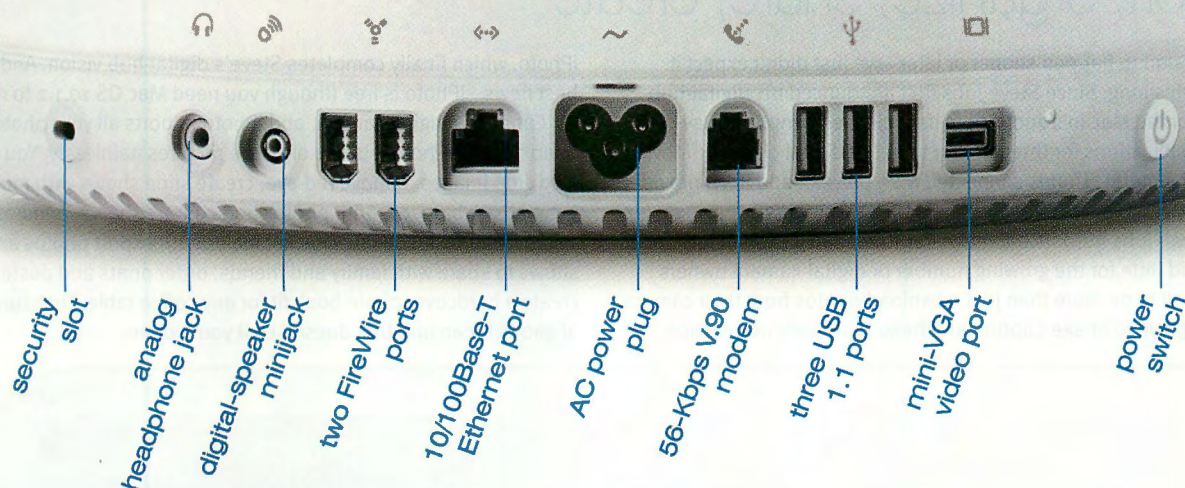


# Plug and Play Around

The iMac packs a plethora of ports: an analog headphone jack for personal listening, a digital-speaker minijack for connecting Apple Pro speakers, two FireWire ports for your DV camera and iPod, a 10/100Base-T Ethernet port to link up to a wired network, a 56-Kbps V.90 modem in case you're not fortunate enough to

have a broadband Internet connection, a mini-VGA video port for one of those antique CRT thingies (mirrored video only), and three USB 1.1 ports for all your USB goodies (reserve one of these for an iSub, because even the nifty Apple Pro speakers lack bottom-end oomph).

PHOTOGRAPH COURTESY OF APPLE



	Entry Level	Middle of the Road	Whoa!
<b>Processor</b>	700MHz G4	700MHz G4	800MHz G4
<b>RAM</b>	128MB	256MB	256MB
<b>Hard Drive</b>	40GB	40GB	60GB
<b>Optical Drive</b>	CD-RW (24X CD-R write, 10X CD-RW write, 32X CD-ROM read)	Combo (12X CD-R write, 8X CD-RW write, 8X DVD-ROM read, 32X CD-ROM read)	SuperDrive (2X DVD-R write, 8X CD-R write, 4X CD-RW write, 6X DVD-ROM read, 24X CD-ROM read)
<b>Speakers</b>	Internal	Internal plus Apple Pro	Internal plus Apple Pro
<b>Price</b>	\$1,299	\$1,499	\$1,799

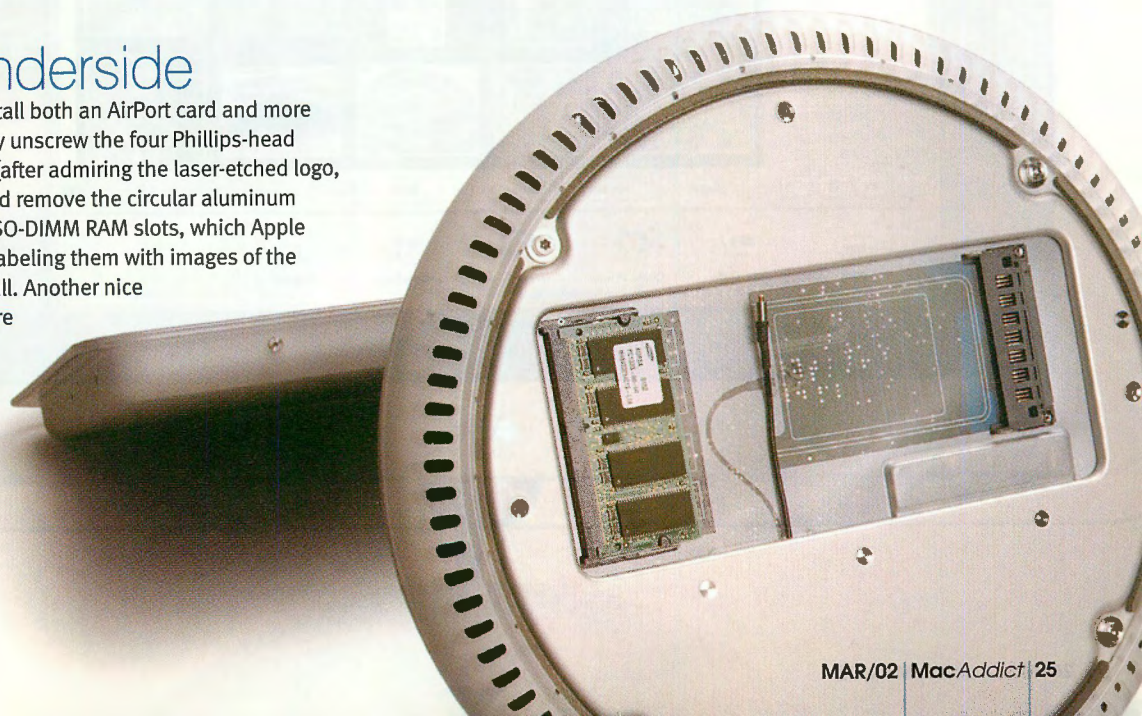
## Inside the iMac

The three new iMac models have more similarities than differences—and there's an equal amount of good and bad news for each one. Although each has a PowerPC G4 CPU with 256K of on-chip level 2 cache, none has power-boosting level 3 cache. Each has a 100MHz system bus, not the 133MHz bus found on the G4 towers and high-end PowerBook G4. Like all Macs since the Pliocene era, each model has Ethernet, but none boasts the zippy Gigabit Ethernet. Each is AirPort ready, but none comes with an AirPort card built in. And, of course, all of the iMacs come with a bright 15-inch TFT LCD display (to complement the powerful nVidia GeForce2 MX graphics processor)—there's no downside to that.

## Under the Underside

Apple has made it easy to install both an AirPort card and more RAM in the new iMac. Simply unscrew the four Phillips-head screws on the iMac's underside (after admiring the laser-etched logo, Ethernet ID info, and so forth) and remove the circular aluminum plate. You'll see the AirPort and SO-DIMM RAM slots, which Apple has clearly identified for you by labeling them with images of the appropriate components to install. Another nice touch: The four screws that secure the plate are captive—though you can unscrew them, you can't remove them altogether, which means you'll never lose them.

PHOTOGRAPH BY MARK MADEO





# iPhoto

Import, organize, share, create

It was bound to happen sooner or later—we just didn't expect it to take this long. Since Steve Jobs first announced his digital-hub concept for the Mac in 2000, Apple has released simple, classy-looking applications for three of four targeted digital devices; iMovie tied in DV cameras, iTunes connected MP3 players, and iDVD provided the link to DVD players. What was left? Digital cameras.

Although Jobs introduced Image Capture at Mac Expo in July 2001, the app did little for the growing number of digital-camera owners who wanted to do more than just download photos from their camera. Well, say g'bye to Image Capture and hello to Apple's newest app,

iPhoto, which finally completes Steve's digital-hub vision. And the best news—iPhoto is free (though you need Mac OS 10.1.2 to run it).

Connect a digital camera, and iPhoto imports all your photos. Snap happy? iPhoto lets you organize pictures painlessly. You can also crop images, remove red-eye, create slide shows with music, generate Web pages, print photos and contact sheets, annotate photos with text (spelling checker included!), export photos and slide shows to share with family and friends, order prints and posters, and create a hardcover photo book fit for any coffee table. That sure is a lot of goods for an app that doesn't cost you a dime.

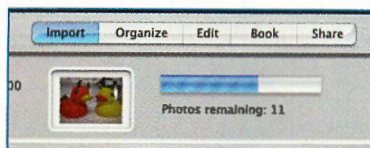


iMac



## Import

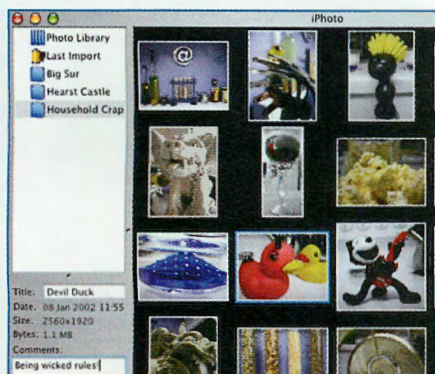
It doesn't get any easier than this: When you connect a supported USB digital camera or card reader, iPhoto launches. Click Import, and iPhoto imports all of your images into your Pictures folder, displaying them as thumbnails in the Photo Library. Give the view slider (at the window's bottom right) a good workout by making your thumbnails grow and shrink from a minuscule icon to an interface-size image instantaneously. You can also change the look of the view window in the preferences. The downside: iPhoto can't import QuickTime movies shot with your digital camera, so you need to download these to your Mac using your regular method.



**Connect a camera or card reader, and then import photos into your Pictures folder at the press of a button.**

## Organize

If you're familiar with iTunes, you'll feel right at home with iPhoto, which displays your entire photo collection in the Photo Library. Create photo albums (aka folders) just as you would set up iTunes playlists, and then drag and drop your images from the Library into the appropriate albums. iPhoto can also



**You create photo albums just as you would create iTunes playlists. You can also annotate pics with text to find your favorites fast.**

organize your Photo Library according to batch (each group of pics you download forms a batch, sort of like a virtual roll of film) or by date (when you snapped each photo). For better search capabilities, give each photo a title and caption—iPhoto displays this info, as well as the file's creation date and resolution, in the information palette.

## Edit

iPhoto includes three of the most common editing features: rotate, crop (including preset constraints for common sizes), and red-eye reduction. All three features are dead simple to use, but very effective. And all you Ansel Adams wanna-bes can turn any photo into a nice black-and-white image with the click of a button. But arghhh! iPhoto doesn't include any tools for correcting problematic photos—a feature we hope to see in iPhoto 2. Fortunately, you can set the preferences to have iPhoto launch a separate (more powerful) image-editing app of your choice whenever you double-click a thumbnail. Now, if only Photoshop ran in Mac OS X...



**We rotated this photo and converted it to black and white. Now we'll crop it to exactly 5 by 7 inches.**

## Book

This feature is just too cool. How would you like to have your photos published in a hardcover, linen-bound book? Starting at \$30, you can. Just select one of the six picture-book layout presets, rearrange any of your photo-album folders so the pictures line up in the desired order of appearance, and let iPhoto know how many pictures you want to



**Create your own hardcover photo book using one of the included layouts—perfect for any coffee table or Mother's Day gift.**

display on a given page. Depending on the layout you choose, you can add titles and captions or even write a story without reverting to a word processor. iPhoto includes a spelling checker to make you sound smart.

## Share

Be a show-off and share your pics with everyone. iPhoto lets you do this in a number of ways. Build a slide show with music (choose one of the two included songs or select your own) and, if you want, export the show as a QuickTime movie.



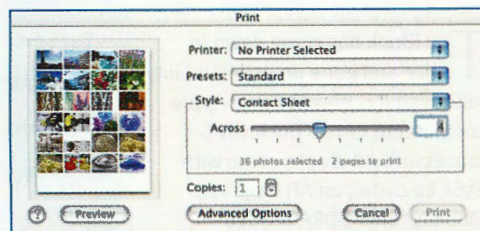
Let iPhoto assemble a Web page of your portfolio for the world to see. Export

**iPhoto allows you to generate and publish a photo Web page, allowing anyone to view your work anywhere.**

images from your library to email to friends and family. Even order prints directly from Kodak (you can get a 20-by-30-inch photo for only \$20!) without leaving the app (Internet connection required).

## Print

If you've got an iPhoto-supported printer, the app can speak your device's language and will offer templates to help you print photos in different ways.



For instance, you can create contact sheets and control how many pictures appear on them; print standard 4 by 6, 5 by 7, or 8 by 10 photos; or even print full-page, full-bleed photos. And forget Hallmark. With iPhoto's greeting-card template, you can really care enough to send your very best by turning photos into single-fold or double-fold printed cards.

**Faster and simpler to use than film, iPhoto lets you print photos, create contact sheets of your images, and make greeting cards.**



# iBook

Big Brother has arrived (in a good way)

The only complete Expo surprise came in the form of a new portable. Apple's latest iBook is neither your typical speed-bumped revision nor a total overhaul like the new iMac. Instead, it provides an answer to the only legitimate complaints we've heard about the 2001 iBooks—namely, the relatively small (12.1-inch) screen size and the disappointing amount of stock RAM (64MB to 128MB). The new top-end iBook sports a 14.1-inch display and 256MB of RAM. That's on top of the update the iBook received late last year, which upped the machine's processor and bus speeds to 600MHz and 100MHz, respectively. Add up all the changes, and you've got the missing link between the consumer iBook and the mighty Titanium PowerBook G4—\$500 more gets you a low-end TiBook, while \$600 less gets you a low-end iBook.

The top-end iBook actually *surpasses* the TiBook in one key area: battery life. According to Apple, the 14.1-inch iBook runs for up to 6 hours between charges, while all of Apple's other 'Books—iBooks and TiBooks alike—top out at 5 hours (if you're lucky). At 6 pounds, the high-end iBook is also a wee bit heavier than its younger siblings, which weigh in at 4.9 pounds, and even the TiBook, which tips the scales at 5.4 pounds. But what's half a pound between friends, anyway?



PHOTOGRAPH COURTESY OF APPLE

## Inside the iBook

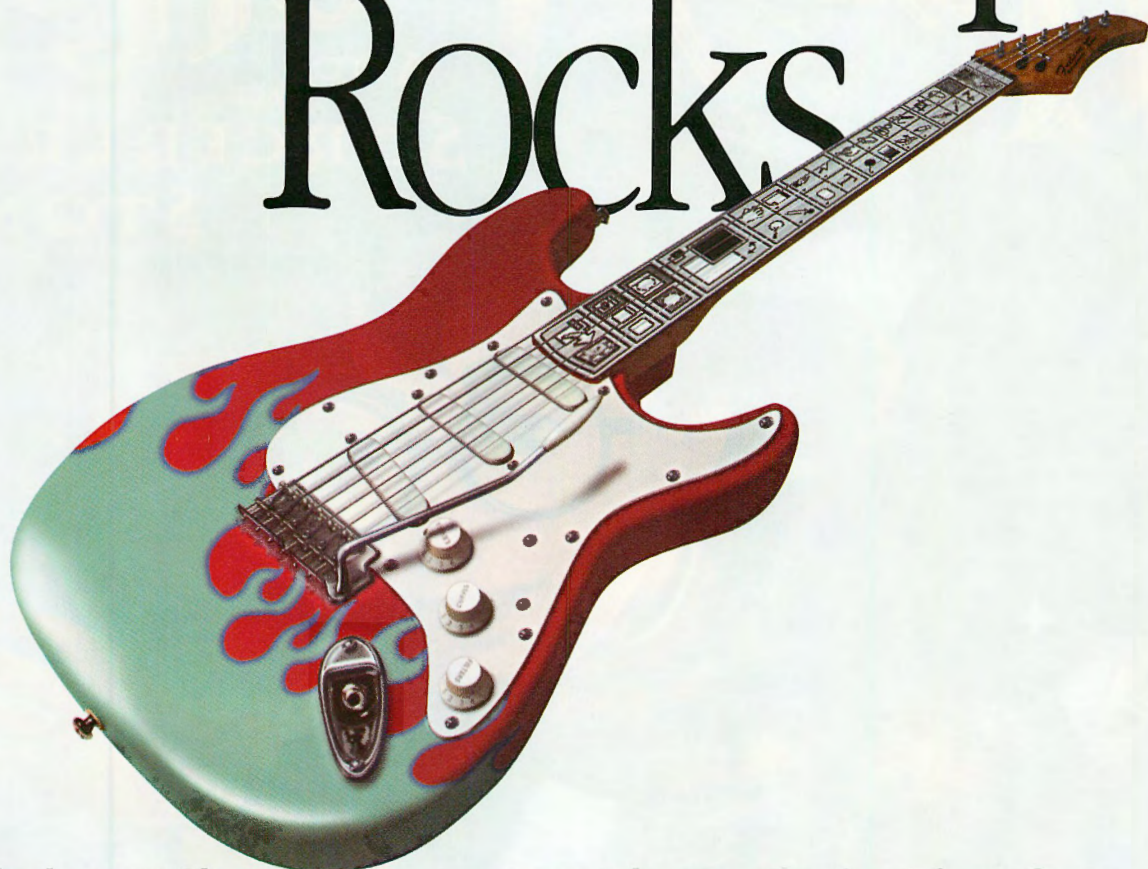
The iBook has come down in price and gone up in desirability (although it is now the only Apple computer to run on the lowly G3 processor). All iBooks come with 256K L2 cache, an ATI Rage 128 Mobility (8MB SDRAM video memory) graphics processor, 10/100Base-T Ethernet, a 56-Kbps V.90 modem, two USB ports, and one FireWire port. Add to that a built-in AirPort antenna (AirPort card not included), and you have a laptop that takes portability very seriously indeed.

	Entry Level	Middle of the Road	Holy Cow!
<b>Processor</b>	500MHz G3	600MHz G3	600MHz G3
<b>Bus Speed</b>	66MHz	100MHz	100MHz
<b>RAM</b>	128MB	128MB	256MB
<b>Hard Drive</b>	15GB	20GB	20GB
<b>Optical Drive</b>	CD-ROM (24X)	Combo (4X CD-R write, 4X CD-RW write, 6X DVD-ROM read, 24X CD-ROM read)	Combo (8X CD-R write, 8X CD-RW write, 8X DVD-ROM read, 24X CD-ROM read)
<b>Display Size</b>	12.1-inch TFT XGA display	12.1-inch TFT XGA display	14.1-inch TFT XGA display
<b>Battery Life</b>	Up to 5 hours	Up to 5 hours	Up to 6 hours
<b>Weight</b>	4.9 pounds	4.9 pounds	6.0 pounds
<b>Price</b>	\$1,199	\$1,499	\$1,799

The MacAddict editors want their iMacs, and they want them now!



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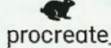


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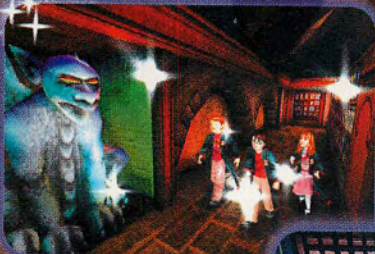
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# Harry Potter

## AND THE SORCERER'S STONE™



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# Mac Maestro



PHOTOGRAPH BY CATHY LU AND ANDREW TOKUDA

At first glance, you might be tempted to label BT (aka Brian Transeau) as just a dance musician or a DJ. But you would be overlooking the fact that he has contributed to all different facets of the music industry and has worked with a number of top-selling artists, many of whom stray as far from the dance-music genre as the movie *Star Wars* strays from reality.

For instance, there's BT's contribution to Peter Gabriel's Millennium Dome concert, for which he composed an arrangement for a 12-piece string section. Then there's the ambient orchestral score he composed for the film *Under Suspicion*. And the fact that he grew up studying classical music and jazz. Yet he hasn't eschewed the type of work that he built his reputation on, either—for instance, he collaborated with Sarah McLachlan to transform a moody, mellow

track called "I Love You" into an up-tempo dance mix.

One label BT is comfortable with, though, is über Mac geek (the guy *codes*). A self-professed technophile, BT is absolutely in lust with his Titanium G4 PowerBook, 867 QuickSilver G4, and sweet AirPort setup, which allows him to work by the pool at his Southern California home. He was also overwhelmed—and overjoyed—when Steve Jobs asked him to appear in a promotional video for the Titanium G4 PowerBook after Jobs read an article in which BT sang the praises of the Mac as the ultimate creative machine.

We visited BT's home music studio in late October, 2001, where he talked to us about his passion for music, his love of Macs, and his hatred for Microsoft Windows—and shared some of his secret remixing tips for the home musician.

Electronic musician and remix specialist BT has expanded the repertoire of high-profile artists such as Tori Amos, Madonna, and \*NSYNC. He says he couldn't do any of it without his Mac.



Find a demo of Propellerhead Software's Reason, Karlheinz Essl's flow, the remix how-to BT put together for *MacAddict* (see page 35), and an exclusive video interview with the artist on the Disc.

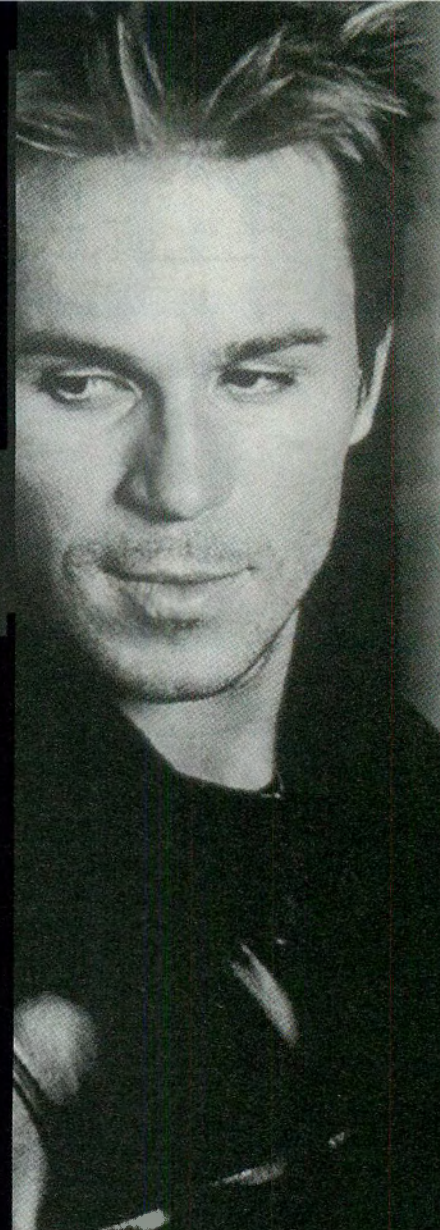
more ►►

by Cathy Lu and Andrew Tokuda



# Sitting Down with BT

The artist gets candid about his music and his Macs.



PHOTOGRAPH BY RALF STRATHMANN

» When *MacAddict* visited BT's home music studio in Tarzana, California, this multifaceted musician (and colorful personality) didn't hold back—on any topic. Find out what political party he associates with Macs, what he thinks of Steve Jobs, and how his beloved G3 caught on fire. Oops.

## » Getting Started

**MA: How did you get started in music?**

**BT:** Well, I got started in music really young, so I've been doing it since I was literally, like, 4. I started playing the piano [using the] Suzuki method. Then I studied string writing and symphonic orchestration and harmony and theory and ear training and all that kind of stuff at the Washington Conservatory [of Music in Bethesda, Maryland], when I was 7 through roughly 10 years old. And then at about 11, I heard break dancing and Jimi Hendrix, and I was, like, "Get me a guitar and a drum machine immediately."

"The whole ethos of Macintosh is punk rock, DIY, let's make something cool and put it in people's hands...and make them feel creative."

**MA: You said, "Forget classical!"**

**BT:** Yeah. Then I joined a bunch of punk rock and indie bands through high school, and at the same time I was building keyboards and simple oscillators and filters and stuff out of Radio Shack project kits in my bedroom. I went to Berklee [College of Music in Boston] and studied jazz, and then I came to

California to try to get a record deal and failed miserably. I ended up going back home [to Maryland] and starting up a record label with two of my friends. We started the label Deep Dish together. And...we got some attention for it, and that encouraged me to keep going.

**MA: You can look at a band like U2 and say, "They're a band, they write music, and they perform it." But you seem to do a lot more than that.**

**BT:** It's confusing.

**MA: Very.**

**BT:** It confuses my mom.

**MA: Can you give an overview of what you do?**

**BT:** What I'd like to think I do is experiment... Whether I'm writing for an 80-piece orchestra and a car-part gamelan, like I did for *Fast and Furious*, or trying to make a boy band cool, like I did with \*NSYNC, it's all in the nature of good experimentalism.

## » Discovering the Mac

**MA: When did you move to a Mac?**

**BT:** It's so funny, 'cause my first computer that I ever got was a PC. And I desperately wanted a Macintosh.

**MA: What year was that?**

**BT:** My first computer I got in [I think] '83...I had 16K of memory in it. I remember mowing lawns obsessively to get 32K of memory, and I just thought I was the pimp of my neighborhood.

**MA: How did you end up with your first Mac?**

**BT:** I went to Berklee in '90...[and] I saw people working on the Macintosh, and I saw how intuitive the operating system was. But...I'm actually glad that I had [experience with a PC] because I learned a lot about coding when I was younger. I learned to program some in Pascal and Fortran and COBOL a little bit. But I got really good at

BASIC. I do a lot of coding now, with a lot of stuff that I do, writing for Csound and SuperCollider, which is based on the SimpleTalk or C language.

Working with a Mac is just so fluid. I still have a PC here, and every time I power it on—I use GigaSampler and Acid on a PC—it's like, what is going on with this operating system? It's just ridiculous. I don't know how anyone works on that computer.

**MA: Which OS are you using—Windows 98?**

**BT:** I don't even know. I try not to think about it. It's just gross. Everything looks gross and pixelated...

**MA: So what are some of the Macs you've owned?**

**BT:** My first really serious Macintosh, when I got my first Pro Tools rig, was a 9600.

**MA: Do you still use the 9600?**

**BT:** No, I don't. I've sold it. And it was a great computer, too. It was very stable, that computer. My blue-and-white G3 was a really important computer to me...[but] I bought



"All you need is a Macintosh and Pro Tools—you can do anything."



some dodgy RAM for that computer...It wasn't in a plastic bag, nothing. [The guy who sold it to me was] like, dragging his feet on the carpet. I'm, like, "Oh, this can't be good." But I needed it, you know? So I paid him for the RAM, I brought it back here, I put it in the computer. And I was hanging out, doing some programming...and I said to the guys [in the studio], "Dude, do you guys smell anything?" And they're, like, "No, what?" I'm, like, "It smells like something's burning." I opened up the computer, and the computer was on fire. The RAM chips were smoldering. So the computer is trashed. I took it to get fixed and they're, like, "It's a paperweight. You can't do anything with it."

## ►► Titanium Lust

**MA: So your main computers right now are...**

**BT:** My Titanium, my G4/867...

**MA: Which Titanium—the high-end first one?**

**BT:** Yes, it's the first one. And yes, my DVD-ROM drive is broken. Was that the next question?

**MA: No...**

**BT:** Everybody's broke. But I love it so much, I haven't had time to get it fixed...I mean, that is just, like, the sexiest piece of hardware I've ever seen in my entire life.

**MA: Do you designate certain computers for certain tasks?**

**BT:** Definitely, definitely. The 867 is my main [Mac]...that I run Pro Tools and Logic Audio on. I really like to use the Titanium for some of the weirder, more obscure, esoteric, shareware-style apps that are incredible.

**MA: What are some of them?**

**BT:** I got one recently called fLow that's really cool. I registered it for, like, \$9 or something [\$15, actually; download it from [www.essl.at/works/flow.html](http://www.essl.at/works/flow.html)]. It's a granular-

synthesis application. But it's amazing.

**MA: Can you play around with Mac OS X? Or are you pretty much stuck in OS 9 right now?**

**BT:** I'm stuck. But I've checked [OS X] out, and it's really cool, and I love the idea of OS X being Unix based and the fact that applications can crash and that doesn't crash your system. The Apple guys have demonstrated it to me, and it's an amazing system. It's just like when we went from whatchamacallit to PCI, new, what the hell was it? [NuBus.]

**MA: What do you need to happen before you can switch over to Mac OS X?**

**BT:** I need Pro Tools and Logic, those two being my main things that I work in all the time. And also Reason, the Propellerhead program.

**MA: You've talked with Steve Jobs before. What do you think of what he's doing?**

**BT:** Steve Jobs is an amazing human being. What he's accomplished is tremendous. The whole ethos of Macintosh is punk rock, DIY, let's make something cool and put it in people's hands...and make them feel creative. I just hyperadmire what that man has achieved.

## ►► Guinness and Titanium Don't Mix

**MA: How do you use Macs in live performances?**

**BT:** I've run Logic Audio live before. And it worked really well, but I just didn't want to dirty up my beautiful Titanium laptop with the smoke machines and stuff.

**MA: So it's not that you're worried about it crashing.**

**BT:** No, not at all, it's rock solid. A bunch of people drinking Guinness and smoking cigarettes and smoke machines billowing all over my Titanium laptop doesn't really appeal to me that much.

## Career Highlights

DJ. Remixer. Film composer. It seems that BT does it all, from producing songs for \*NSYNC to scoring films. Here are just some of the highlights of his career.

### Collaborations

- Worked with Peter Gabriel on his Millennium Dome concert, including a string arrangement for one track.
- Wrote "Blue Skies" with Tori Amos.
- Produced the song *Pop* for boy band \*NSYNC.
- Remixed tracks for artists like Sarah McLachlan, Seal, and Madonna.

### Film Scores

- Scored several films, including *The Fast and the Furious*, *Go, Driven*, and *Under Suspicion*.

### Albums

- Has several albums under his belt, including *Ima*, *ESCM*, and *Movement in Still Life*.
- Current album is *R&R (Rare and Remixed)*, a collection of hit remixes and dance-floor classics.



ESCM



Movement in Still Life



Ima

more ►►



"It's a universal thing amongst musicians. Musicians are Mac users."



**MA:** We also read that you experiment with a lot of beta software.

**BT:** Oh, God, yeah. That's the greatest thing in the world...for two reasons. I feel very inspired when I get my hands on new technology, for obvious reasons...But also, it's really exciting to help mold and shape a piece of software because in some subtle little way you're affecting the music-making process for a lot of different people, and hopefully in a positive way.

## "Let's face it: PCs are Republican computers."

You know, a lot of these guys, the programmers, are not musicians. So you tell them things they wouldn't think of...[For instance], I'm hoping the Propellerhead guys make it so that Reason works with any VST plug-ins. It's, like, what an amazing program, you know? But God, it needs to be able to do that. You need to be able to load [Native Instruments'] Absynth or [Cycling '74's] Pluggo VST. And once I can do that, I'll be able to sit on a plane and render whole passages of break beats.

### ►► When Music Meets the Mac

**MA:** Do you get any criticism about your reliance on technology?

**BT:** A lot of people think computers make music for us. It's a very common thing you find with either nonmusic people or people from different sorts of music other than electronic music. But the funny thing is, now you pick up a Foo Fighters record, and the vocal's Auto-Tuned, everything's been run through Pro Tools, it's ridiculous. So I think people are starting to come around to the fact

that they're just tools. [Technology's] a catalyst for shaping what it is you're trying to purge yourself of emotionally.

**MA:** When were you able to finally do everything you needed to do on your Mac?

**BT:** About '96.

**MA:** What happened in '96?

**BT:** Getting my first Pro Tools card...It absolutely changed the entire sonic landscape of what I'm doing, being able to work as if you were working with a MIDI track, but it being audio—and also, you're not limited by what you play or by controllers, by filter sweeps, or by resonance sweeps, or by frequency modulation. You're limited by nothing. You can use thousands of plug-ins on this material and treat audio as irreverently as you want, in a way that you couldn't just working with it as MIDI. It's insanely powerful.

It's funny, 'cause I go into normal studios, whatever normal is. But professional recording studios have their little MIDI-rig setup and an SSL [studio mixer] and stuff. And I'm, like, "Dude, I do that on my Mac, with a Pro Tools card." It seems like making bread or flour with a mortar and pestle. I'm, like, give me a stick and some flint, and I'll make you a fire, too. All you need is a Macintosh and Pro Tools—you can do anything.

**MA:** Is there an audio program still missing for the Mac?

**BT:** I wish the Sonic Foundry guys would write Acid [a tool for loop-based electronic music]

for the Macintosh...A lot of them are ex-Microsoft programmers, so they have the whole Mac hatred thing.

**MA:** Who are some of the other musicians who use Macs whom you admire?

**BT:** Peter Dinklage. Robert Fripp. Brian Eno. Everybody I know uses a Macintosh. It's insane. Sasha. Paul van Dyk. Tori Amos. Sarah McLachlan...It's just the way to make music. And it's cool, too, 'cause it's sort of a common language. It's like being in a room with a bunch of vegetarians—you have something in common with everyone there. It's a universal thing amongst musicians. Musicians are Mac users. I think Mac people are Democrats, too.

**MA:** I believe Steve Jobs is.

**BT:** Yeah. He heard me say that and, like, freaked out. He loved it.

**MA:** Oh, really?

**BT:** Yeah. Let's face it: PCs are Republican computers.

**MA:** But then that makes 90 percent of the people in the country Republicans, doesn't it?

**BT:** Yeah. Well, I don't know. I just think it's that way of thinking. It's that red tape way of, you know...

**MA:** Corporate?

**BT:** Yeah, corporate thing, you know? Apple is just such a great company, and [the Mac is] the ultimate platform for working on something creative.



BT recommends that newbies buy a USB keyboard like this one, the Roland PC-300.



# BT's Guide to Remixing

How to give your tunes a different beat.

BT and \*NSYNC. It might seem like an unlikely collaboration—something akin to Kevin Smith teaming up with Steven Spielberg to direct a movie. So how did BT, who hails from the electronic-music underground, end up collaborating with the hottest boy band since Menudo? Or remixing tunes for artists like Sarah McLachlan and Tori Amos? You can attribute much of that to record companies, who have been looking for musicians with BT's skills to work with

mainstream artists and widen their appeal. One way he does that is to take existing songs and remix them for distribution to a more diverse audience. Take McLachlan's down-tempo ballad, "I Love You," which BT transformed into a four-on-the-floor, house dance beat fit for any rave.

To demonstrate his remix process to us, BT used his track "The Revolution" from the *Tomb Raider* movie soundtrack. The rhythm style of the song is *break beat*, a rock-style

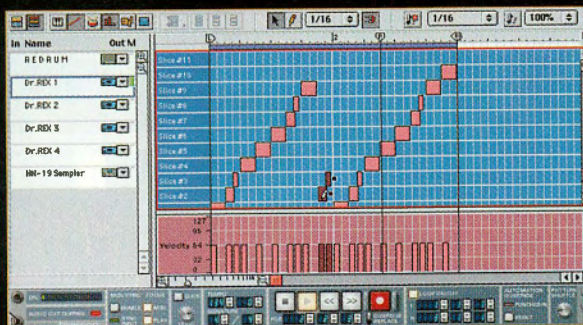
drum pattern, usually in 4/4 time signature, running at approximately 130 to 140 bpm (beats per minute). He decided to change this rhythm to a *house* style, which is the characteristic four-kicks-per-measure drum pattern common in techno or rave music. To follow along at home with this how-to, grab your copy of the Disc and stick it in your Mac. Look for the audio files in the folder called *BT Remix Files*, which you'll find in the *Files from the Print Side* folder.

**1** The most obvious place for BT to start the remix was the drum pattern. He used Propellerhead Software's Reason (\$399 SRP, [www.propellerheads.se](http://www.propellerheads.se)) to program a house drum pattern from scratch. He chose a kick drum sound from his extensive sound library and placed that on the downbeats (1, 2, 3, 4) to establish the pulse. He then chose a hi-hat sound and placed that on the upbeats, or the *ands* of the pattern, to create a *boom-chik-boom-chik-boom-chik-boom-chik* sound. A house beat isn't a house beat without a good disco clap, so BT added one on the second and fourth downbeats. From here, the sound needed a little groove—so he introduced a little bit of syncopation by adding an echo effect, or *delay*, to the clap. Listen to *Remix1.aif* on the Disc to hear what this mix sounds like.

**2** In addition to the programmed beat, BT added a *drum loop* underneath the house pattern. A drum loop is a prerecorded drum pattern, which an artist can splice together in a song (a programmed beat, on the other hand, is a rhythm constructed from individual instruments, like the one BT created in step 1). Loops usually have a set tempo, but this particular loop was a REX file—a loop sliced at the transient peaks. This allowed him to play it in any tempo on a sequencer capable of reading REX files—like Reason—and then modify the drum pattern itself by rearranging the slices. Listen to *RemixREX.aif* to hear what the loop sounds like.



Who needs drummers when you have an app like Reason?



When generating music, you can edit REX files (sliced audio loops) in Reason to give them more versatility.

## The Gear

BT is a self-confessed technophile. If you want proof, witness his multitude of new and classic hardware synthesizers and audio processors or check out his laptop, which he loads to the max with esoteric shareware.

His two main apps are Emagic's Logic Audio Platinum (\$499 ESP, [www.emagic.de](http://www.emagic.de)) and Digidesign's Pro Tools (pricing varies with configuration, [www.digidesign.com](http://www.digidesign.com)). He primarily uses Logic Audio for creating and arranging his tunes, and Pro Tools for mixing and production. He runs these apps on a QuickSilver 867MHz G4, attached to a Cinema Display and tricked out with more than 1GB of RAM. As for the large amounts of shareware with which he experiments, he runs most of those on his Titanium G4 PowerBook. With the TiBook, he can program beats by the pool and use AirPort to transfer files to the server. As BT puts it, "It's mental."

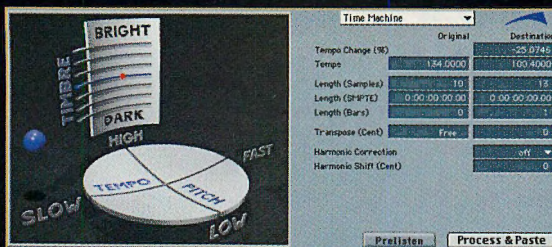


BT's living room is a great example of gear lust.

more ►►

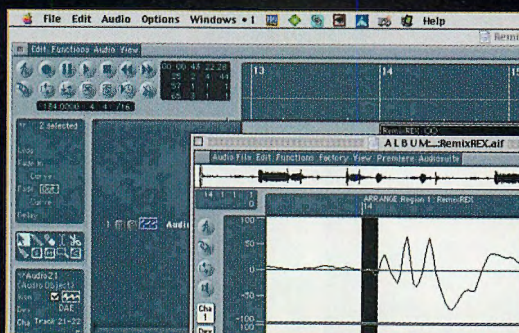


**3** It was time to add a *drop*—a bass effect often used to accent the downbeat of a rhythm. Because of the tonal nature of this sound, BT had to adjust the pitch to match the tune's key signature. Rather than use Steinberg's Time Bandit software (no longer available, [www.steinberg.net](http://www.steinberg.net)), which better suits vocals, BT used the Factory Time Machine and Pitch Machine features built into Emagic's Logic Audio Platinum (\$499 ESP, [www.emagic.de](http://www.emagic.de)). Conveniently, since he also did "The Revolution" arrangement in Logic Audio, he could easily replace the break-beat track with the newly recorded house patterns. Listen to Bass.aif on the Disc.



The Time Machine in Logic Audio Platinum can alter the length of an audio segment without affecting its pitch.

**4** BT is a stickler for perfect timing, so rather than just dropping the house beat and loops onto the arrangement, he used Logic Audio's built-in audio editor to perform surgery on the drum patterns. He tweaked every peak, such as the kick and clap transients, to play *exactly* on the beat, thus making the loops *sample accurate*—a process that involved some *time stretching* (the process of speeding up or slowing down a sound without altering its pitch) and cutting of segments surrounding the waveform peaks. In fact, BT has his own commercial-sample CD called *Breakz from the Nu Skool* (\$130, available from [www.soundsonline.com](http://www.soundsonline.com)), containing hundreds of sample-accurate drum loops ready for use in your own projects.



You can cut, paste, stretch, and squash every waveform to perfection in Logic Audio Platinum.

**5** Finally, it was just a matter of arranging the new beats with the rest of the audio tracks in Logic Audio Platinum. Since the software represents audio tracks as blocks in the Arrangement window, the process just involved clicking and dragging around squares onscreen. You can listen to a rough remix of "The Revolution" on the Disc. Just look for The Revolution Remix.mp3 file.

Of course, this is a grossly oversimplified approach to remixing, but you get the idea. Other aspects of BT's process include sound design, audio processing, and recording additional instrumental tracks.



On tracks Audio 5 and 6, the new house pattern takes over the beat.

## Remixing Sarah McLachlan

When a record company or artist commissions BT to remix a song, it gives him the separate tracks from the original mix—primarily the vocals. The first step is to determine the intended style for the remix so he can establish the appropriate tempo. Then he gets to work on the isolated vocal track.

In the case of BT's remix of Sarah McLachlan's "I Love You," he had to speed up the vocals' tempo from about 80 bpm to a danceable 130 bpm, using Steinberg's Time Bandit to handle time stretching. It's not a one-click operation, though. BT stretches a vocal track at different speeds—even slower speeds—and assembles pieces from each track to get the proper phrasing. When you hear the results in this case, you'd never know McLachlan originally recorded the song as a crooner. You can hear the remix on BT's double-CD set, *R&R* (*Rare & Remixed*).



BT's *R&R* CD set features a compilation of remixes he did, including Sarah McLachlan's "I Love You."

## BT's Beginner Tips

We asked BT to provide some sage advice for electronic-music newbies, and to our surprise, he says it is possible to get started on a budget. First, he recommends a USB keyboard such as the Roland PC-300 (pictured on p34; \$240 ESP, available from [www.edirol.com](http://www.edirol.com)), as well as Reason, a self-contained music-production application from Propellerhead Software. With Reason, he says, you have everything you need to start making complete songs.

But BT's most heartfelt piece of advice for beginning musicians is that you study music—particularly styles of music you're *not* interested in creating. He says if you learn about music outside the sphere of what you want to create, it will help your writing skills. He truly believes that "anyone can make music on a Mac, just like anyone can make a movie on a Mac." Whether what you create is good...well, that's another story.



Reason brings the studio to the closet musician.



like ships  
passing in  
the night

Download a free demo. [www.realbasic.com](http://www.realbasic.com)



# Office Tricks



Follow along with this article using the 30-day Office v. X Test Drive demo on the Disc.

Powerful, elegant, better than ever. We tell you how to get the most out of Microsoft's new Office v. X suite.

by Gene Steinberg

## Inside

### Word X p39

Formatting just got easier.

### Excel X p40

Looking better than ever.

### Entourage X p42

Much more than just email.

### PowerPoint X p43

More-presentable presentations.



This icon denotes a feature new to Office.

The phrase “elegant Microsoft application” may sound like an oxymoron, but that’s exactly what Office v. X is. With the release of the highly anticipated Office suite of products for Mac OS X, Microsoft has succeeded in releasing the best-looking set of productivity applications to date—one that includes more than 700 redesigned icons, zillions of new dialog boxes, and the ability to make killer-looking charts and presentations sure to make your boss or clients look twice. It’s the perfect complement to the beauty, power, and sophistication of Mac OS X.

But Office v. X isn’t *just* about looks. Like the Tooth Fairy, it also brings several small yet welcome treats, particularly when it comes to Excel, the spreadsheet program, and Entourage, the email client and PIM (personal information manager). Here, we help you discover how to use some of Office v. X’s new features (also see “Office Turns X,” Nov/01, p41) and *rediscover* some older features you’ve forgotten about (or can’t find under the apps’ incredibly dense menu bars).

One more thing: Not *everything* is peachy in Office v. X land. While it is an elegant product, some users have reported stability issues, such as crashes, redraw problems, and other erratic behavior. Still, Office v. X is a great advancement for the suite as a whole and the tool of choice for those who want to get productive in Mac OS X.



# WordX

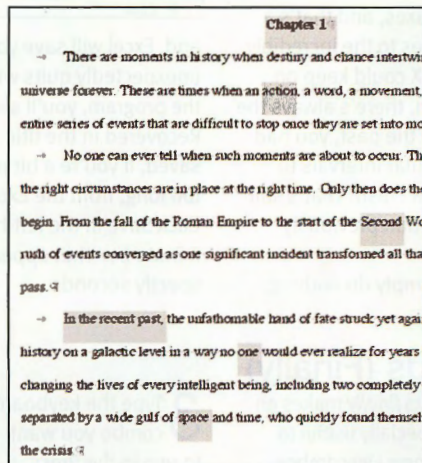
Microsoft didn't change a whole lot in the most popular word processing program on the planet, but the company has spiffed up the icons and added a few simple yet important new features. Anyone who has ever tried to format a Word document will fall in love.

## Select More Than One Item

One of Word's most tenacious rivals is a word processor called Nisus Writer. This venerable word processor includes a useful feature called *noncontiguous selection*, which allows you to select separate text areas in your document at the same time. In a better-late-than-never rip-off, Word X has introduced *multiselection*, a feature similar to noncontiguous selection and just as easy to use—plus, it's easier to spell.

To multiselect items in a document, Command-click each part of your document that you want to highlight. Once you've highlighted each section of text, you can apply new formatting to all of these elements at one time. This is great if you

want to, say, change the headlines in your Schenectady Mac User Group newsletter from 24-point Times to 36-point Apple Garamond. You can also perform word counts and spell checks of only the selected areas, although you can't use the multiselection feature to print multiple text areas of the same document.



With Word's multiselection function, your selections no longer have to connect.

## Clear Formats

You're putting together your user group newsletter and you decide to try out *all* those free fonts you've acquired over the years, plus a few new formatting tricks. Unfortunately, with the varied typefaces, sizes, bolding, italicizing, indenting, and bulleting, it ends up looking like a ransom note—not the right feel for advertising your annual bake sale and software swap. “Oh well,” you think, “time to start over from scratch.” Not so fast—you can now get rid of character and program formats in one fell swoop.

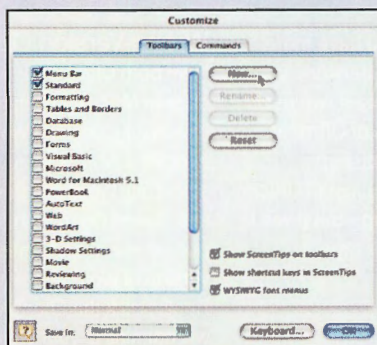
In your document, simply select the items from which you want to remove formatting. Word's multiselection feature works well here (see “Select More Than One Item,” left). From the Edit menu, select Clear, then Formats. That's all there is to it—your text is now unformatted, and you're back to the default font you set in the Font dialog under the Format menu. See, even Word can be easy to use...sometimes.

## Roll Your Own Toolbars

Word has 23 toolbars in all, and if you activate all of them at once, that may not leave any room to display an actual document. To cure Word's Excessive Toolbar Syndrome, make some customized toolbars that include only the commands you use. Here's how:

1 Go to the Tools menu (after all, it is a toolbar you want to create) and choose Customize. The Customize command delivers one of those modal dialog boxes you see all too often in Word—in plain English, that means the window ties up the app and prevents you from doing anything else. (Although you can use other apps.)

2 Click the check boxes next to the name of the toolbar or toolbars you want to make visible. This will allow you to drag and drop the desired icons to fill up your new toolbar. Then click the New button and give your toolbar a name.



Click the box next to a toolbar to make it appear. Then click New to create your own.

3 It's time to populate your new toolbar. Hold down the Option key and drag the buttons from any existing toolbar to your new toolbar.

! Don't forget to press the Option key while dragging the icons. If you don't, the buttons will disappear from the *original* toolbar. (Yes, you can use the Reset button to restore a selected toolbar to its original configuration, but why not get it right the first time?)

4 When you're done, go to the Save In pop-up menu at the bottom of the Customize window; select the name of the template or document in which you want to store the toolbar. If you choose Normal, your toolbar will appear in all your Word documents.



Ah, the sweet smell of organization. Here's your custom toolbar, featuring the commands *you* need.

**Tip** After you install Office v. X, don't file away your installation disc just yet! Some desirable goodies that come on the Office disc aren't part of the usual installation process. For instance, you'll find Windows Media Player, Microsoft's multimedia application for viewing non-QuickTime videos, as well as some extra clip art, fonts, and templates.



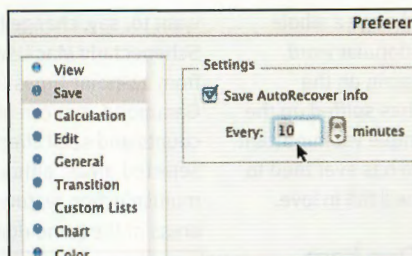
# Excel X

Whether it's charting financial projections for your company or setting up a weekly exercise routine (we know you mean well), you can do all sorts of cool things with Excel X, Office's spreadsheet application. It doesn't boast a ton of new features, but those Microsoft *has* added are spectacular—plus, the old stuff looks much, much better.

## Use AutoRecover to Save Your Ass

**NEW** One thing's as certain as death and taxes, and that's a system crash—yes, even when it comes to the incredibly stable Mac OS X. And even if Mac OS X could keep on ticking like the proverbial Timex watch, there's always the inevitable, inopportunistically timed power failure. In the past, you had to remember to save your Excel document at regular intervals to prevent the loss of valuable data in the event of a crash. That's still the best way—but just in case, Excel X has an option previously available only in Word: AutoRecover.

The best part is the setup—or lack thereof. Simply do nothing,



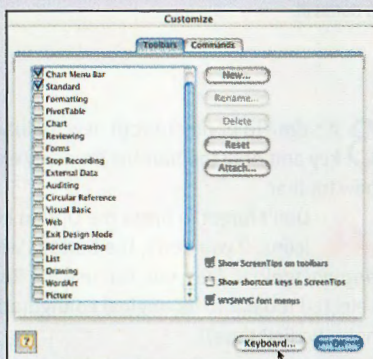
For an added sense of security, reduce the AutoRecover interval in the Preferences dialog box.

and Excel will save your workbook every 10 minutes. If Excel unexpectedly quits with unsaved changes, next time you launch the program, you'll see a copy of your document with the word Recovered in the title. This will be the version AutoRecover last saved. If you're a bit paranoid about saving and think 10 minutes is too long, from the Excel menu, open the Preferences dialog box. Click Save in the left-hand pane, and then change the interval in the minute box that appears. If you're a true type A, sorry—you can't specify seconds.

## Customize Your Commands (Finally)

**NEW** The ability to change keyboard shortcuts *finally* makes an appearance in Excel. This feature is especially useful to those folks who never adjusted to the new key combos Microsoft introduced in Excel 2001.

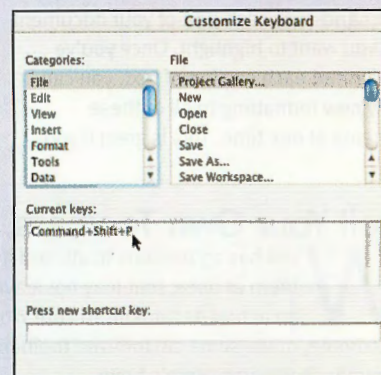
1 Choose Customize from the ever-useful Tools menu to bring up the Customize dialog box. Click the Keyboard button at the bottom.



Click the Keyboard button to start customizing key commands.

2 From the Categories pane on the left, pick the menu that contains the keystrokes you want to change (for instance, File or Edit). In the pane on the right, click the command you want to modify—the current key combos will appear in the Current Keys box.

3 Type the keyboard combo you want to use in the Press New Shortcut Key box. When you click Add, a warning will appear if the shortcut already exists (Excel's massiveness means you'll see this warning a lot). You can either usurp that shortcut for the command you're trying to customize or find a new combo.



You can change shortcuts in the Customize Keyboard box.

**Tip** Reset All reverts all of your shortcuts to the standard factory-issue combos. Also note that you can change Word keystrokes the same way—simply bring up the Customize dialog box in the Tools menu.

## Office Oddities

Although Office v. X is a solid product that truly takes advantage of Mac OS X's beauty and power, you *will* run into several problems and annoyances. Here are some of the most common—along with some solutions, so don't pull your hair out.

**Multi-Mac Impasse** If you have more than one Mac hooked up to a network, you need to get two copies (or at least two user licenses) to use both versions of Office at the same time. Like other publishers, Microsoft won't stop you if you install Office on a desktop Mac and a laptop—but it will if you try to run both at the same time.

**Wrong-Version Obstruction** You have both Office 2001 and Office v. X installed on your Mac. Annoyingly, though, Mac OS X insists on launching Word 2001 when you try to open a Word app. To solve this problem, select any Word document and go to Show Info. Select Open With Application from the pop-up menu and choose the Mac OS X version of Word to open that document. Finally, click the Change All button so Word X will open all of your Word docs.

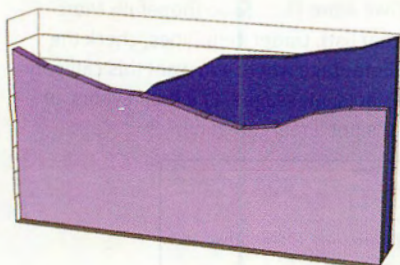


## Make it Transparent



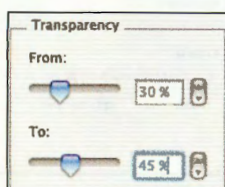
While the feature changes in Excel X may seem feather light, one in particular is worth the price of admission: the ability to create transparent pictures or backgrounds in a worksheet or chart. Transparency can make your illustrations look professional, and it eliminates trips to Photoshop. Here's how we spiffed up a regular ol' chart in Excel:

**1** Select the part of your chart you want to make transparent. In this example, the data charted in front obscures the data charted in back.



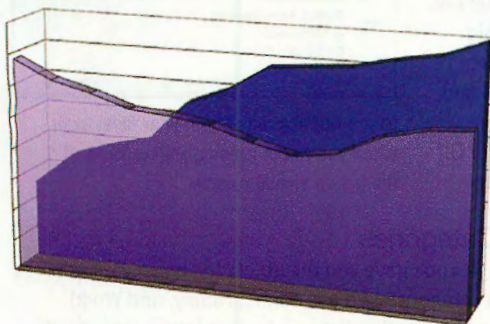
Without transparency, it's impossible to see all of the data.

**2** Double-click the area you want to fix—this will produce the Patterns box. Click the Fill Effects button and then the Gradient tab. Choose the shading and color styles you want, then adjust the transparency sliders at the bottom right (the higher the figure, the greater the transparency).



In the Fill Effects box, adjust the sliders to control transparency.

**3** Admire your handiwork. You'll see the partially transparent 3D area for the data charted in the front, allowing you to also see the data charted in the back. Notice also that Mac OS X's Quartz graphics technology has antialiased all of the lines in the chart, greatly reducing the dreaded jaggies. Nice.



A little transparency goes a long, long way.

## Code the Easy Way

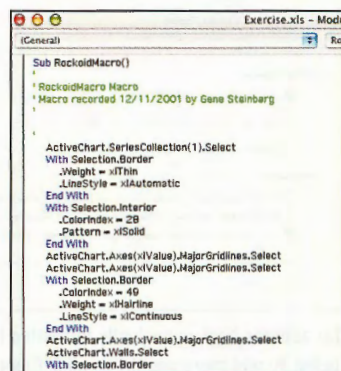
One of the great features Office offers is the ability to create custom macro scripts to automate tasks. Once you create your script, you can use Microsoft's Visual Basic Editor or the 30-day demo version of Real Software's REALbasic (another goodie in the Value Pack folder) to tweak it. Unfortunately the REALbasic demo is so limited that it's not worth using except for practice; if you're really into coding, purchase the full version of the software (then again, if you're into coding, you probably already have one). One big benefit of REALbasic over Visual Basic is that you don't have to confine your handiwork to Office. You can use it to make real programs that will run on your Mac outside the Microsoft environment. Here's how to create a script using Visual Basic:

**1** Go to the Tools menu and choose Macros, then Record New Macro.

**2** Name your macro (no punctuation or spaces between words), and specify in which workbook you want to place this macro. You can also create a keyboard shortcut for your macro.

**3** Start performing the actions for your macro (it's not a bad idea to do a run-through before recording for real). When you're done, either click the Stop Recording button in the macro toolbar that appears in your document window or, if you need to set up the next sequence of events, press Pause Recording.

**4** Once you finish the macro, you can edit it. From the Tools menu, select Macro, then Macros. Select the macro you created and click the Edit button to examine your handiwork. Microsoft's Visual Basic Editor opens by default, and you can edit and fine-tune your code there.



Edit your script in Visual Basic Editor.

**!** Unfortunately, Visual Basic's Help menu doesn't install by default. You have to add it via the Value Pack installer located in the Value Pack folder on your Office v. X CD. Don't ask—it wouldn't be a Microsoft product if *everything* made sense.

**Template Trouble** You've spent the past year creating custom templates, and you want to use them in Office v. X. No problem—just make sure to remove your templates before uninstalling old versions of Office (they're in the Templates folder in the Office folder). If you are using both Office 2001 and Office v. X, just copy your custom templates to the Templates folder in each Office folder. And while you're at it, don't forget to copy your custom dictionary.

**Entourage Enigma** The first release of Entourage X caught a bug—a Hotmail bug. If you set it up to check your Hotmail account, it crashes while updating your email folders. There is a fix, however. Check out Microsoft's MacTopia Web site for an Entourage X update that addresses this problem ([www.microsoft.com/mactopia](http://www.microsoft.com/mactopia)).

**Address Book Dilemma** Entourage X can easily parse the data from Apple's Mail app and import all of your messages in moments. But Microsoft hid the Import From Mail AppleScript for this feature in the Utilities folder tucked in the Value Pack folder on your Office installation CD. Unfortunately, you can't import contacts you've set up in the Mail application's Address Book. Any way around this problem? Well, we hope you enjoy cutting and pasting.



# Entourage X

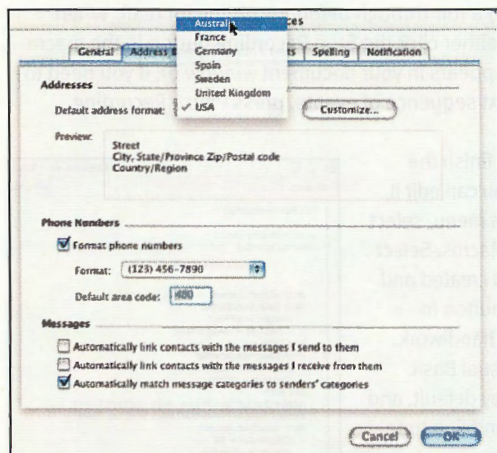
When it comes to the sheer number of changes in Office v. X, Entourage X fared best. From a bright new interface to an internationally flavored address book, there are a lot of goodies to savor in this PIM and email program.

## Go International with Addresses



NEW

New to Entourage X is the ability to format a contact's address for a country or region outside the United States. So if you know someone who lives in France, where *le code postal* (France's equivalent of the ZIP code) goes before the name of the city, Entourage X will sort it all out for you. When setting up a new contact, just enter the country's name in the Country/Region box and the postal code in the Zip/Postal code box. Entourage X has built-in default formats for Australia, France, Germany, Spain, Sweden, and the United Kingdom. You can add new countries by going to the Entourage menu, choosing General Preferences, and clicking the Address Book tab and then the Customize button.

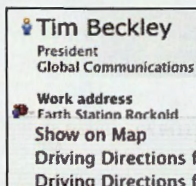


Our address book is perfectly formatted for use Down Under. To add more countries, click Customize.

## Find Your Mother-in-Law's House

Luckily, or perhaps unluckily, Entourage can help ensure that you don't get lost while you're trying to find your mom-in-law's palatial estate. But before you ask for directions, you have to create a contact for yourself and choose which address (home or work) you want as your default (you'll find the Default Address check box in the Home and Work categories when you're entering your contact information).

Next, click your in-law's name in the Address Book, and her information will appear in Entourage X's preview pane. Click the small *i* icon to the left of the address, and a pop-up menu will appear where you can decide whether you want to see her home on a map or receive driving directions from your home or office. The info will appear in a browser window courtesy of (what else?) Microsoft's Expedia.com travel Web site.



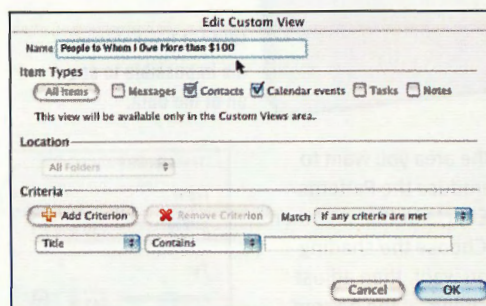
No excuses, no getting lost. Entourage X gives you all the directions you need.

## Use Custom Views



NEW

When it comes to PIMs, you want to organize your information so you can easily find it. Custom views are the answer. Each piece of Entourage X has its own set of standard views, such as Family and Personal categories. Now you can spice things up by adding new categories. From the File menu, select New, then Custom View. Name your Custom View, such as *People to Whom I Owe More Than \$100* (hopefully there won't be many contacts in that list). Under Item Types, check the boxes next to the places in Entourage where you want this category to appear—for instance, Contacts, Messages, Calendar Events, or Places I Can Run To (OK, that's not a real category).



Add categories that suit your lifestyle via the Edit Custom View window.

## Stay Notified With Office Notifications



NEW

You've set up a reminder in Entourage X so you can be prepared for that biannual dental appointment. But how do you receive that reminder when Entourage isn't open? No problem. Office Notifications displays a handy reminder notice even if you're not running Entourage, so there's no escaping the drill and the Novocain. The feature is on by default. If you want to avoid real life for a while, open Entourage X and, from the Entourage menu, choose Turn Off Office Notifications.



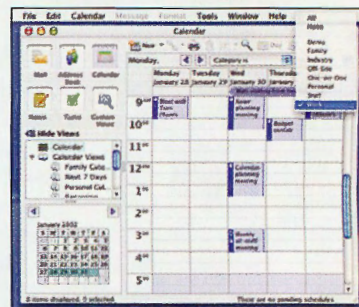
Office Notifications get in your face, even when you're not running Office. Think of them as a virtual parent.

## Check Your Categories



NEW

Entourage 2001 gave you the ability to search your address book by category (such as Friends, Family, and Work). Entourage X goes the distance by also letting you search your calendar by category. Simply click the search pop-up menu in the upper-right corner of your calendar and select Category Is. Then choose a category such as Family and see all of those budget meetings disappear—if not from your life, then at least from your calendar.



You can view just one category on your calendar in a jiffy.



# PowerPoint X

Microsoft didn't exactly overhaul PowerPoint X, the slideshow component of Office, but some of its features work better thanks to Mac OS X's Quartz imaging. For example, all your PowerPoint charts can benefit from transparency, which makes for much more scintillating presentations.

## Package Your Presentations

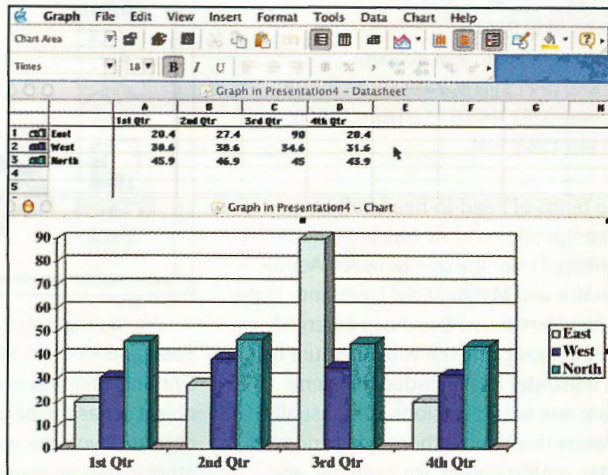
Like graphic-creation and page-layout software, PowerPoint doesn't store the graphics and charts you put into the program but rather *links* to them. If you want to send the whole kit and caboodle to someone else, you have to gather all those files. Thankfully, PowerPoint X does this in one fell swoop by putting copies of all those files in a single folder, much like the Collect For Output feature in some graphics software—saving you the drudgery of seeking out and bundling your files manually.

To package your project, choose Save As from the File menu. Click the Format pop-up menu and choose PowerPoint Package. Give your presentation a name in the Save As box and then click Save to store the package.

## Create a Chart Without Using Excel

All right, you want to make a fast chart for PowerPoint, but you don't want to fuss with an Excel spreadsheet. Well, you don't have to. Microsoft offers a tiny application called Graph that will take care of the job for you.

With your slide open, choose Chart from PowerPoint's Insert menu; Graph launches automatically. Plug the numbers for your chart into Graph's data sheet, then pick a chart type from the Chart menu. Best of all, as you develop your chart, PowerPoint automatically updates the data in your slide. Smart, very smart. If you need to fix the chart later on, just double-click the chart from within your slide, and Graph launches in a jiffy.



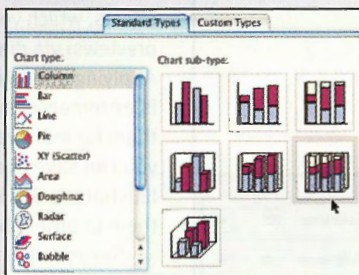
Graph saves a trip to Excel when you want a fast and dirty chart.

## Make Your Presentation Move

Other than throwing them bags of cash, there's no better way to make your audience members perk up than adding motion to your presentation. Here's how:

1 Make a new PowerPoint presentation. One quick way to get going is to pick a template from the Project Gallery that matches the kind of presentation you want to create. There's nothing wrong with letting Microsoft do the work for you.

2 Open Excel and create a chart from *your spreadsheet*. The fastest way is to give in and use Chart Wizard's prefab charts, available from the Insert menu.

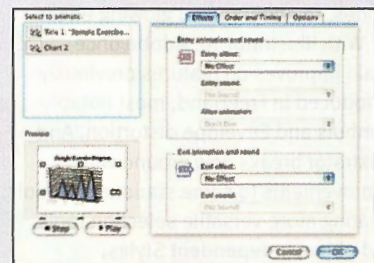


**Excel's Chart Wizard provides a shortcut for making charts. Don't worry, we won't tell your boss.**

3 Head back to PowerPoint and insert the chart into a new slide. From the Insert menu, choose Object and then Create From File, and select the right Excel file.

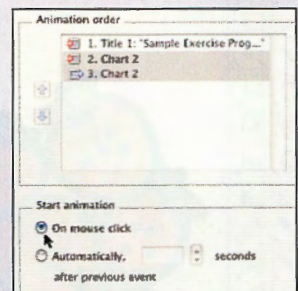
4 To give your chart some movement, go to PowerPoint's Slide Show menu, choose Animations and then Custom. In the Custom Animation dialog box that appears, click the Effects tab, and in the Select To Animate panel on the left side, select the

slide element you want to animate. Then select the desired entry and exit effects. PowerPoint gives you a nice selection, ranging from fade-ins and fade-outs to dissolves, splits, and wipes. Playing with them is half the fun.



**The Custom Animation box allow you to select which elements to animate and which effects to use.**

5 Under the Custom Animation dialog box's Order And Timing tab, you can change the order in which PowerPoint animates the material (for instance, you can make your title appear first, followed by the chart). There you can also select how the animation starts—On Mouse Click, which does what the name implies, or Automatically, which starts the animation as soon as the slide appears.



**Customize your animation further under the Order And Timing tab.**

6 To take a gander at how your animation looks, click the Play button. Financial data just got a little more interesting, no?



# reviews

Better living through smart shopping.

## Illustrator 10

### design & graphics

**Company:** Adobe Systems

**Contact:** 800-833-6687, [www.adobe.com](http://www.adobe.com)

**Price:** \$399 (SRP), \$149 (upgrade)

**Requirements:** G3; Mac OS 9.1 or later, or Mac OS 10.1 or later; 128MB RAM

In terms of head-to-head software competitions, none has been more heated than the one between Adobe Illustrator and Macromedia FreeHand. In the past four versions, a trend has emerged: FreeHand has come out with a feature first, then Illustrator has included the same feature one or two versions later, usually implementing it more thoroughly and with greater sophistication. For example, way back in version 8, FreeHand introduced Transparency; in version 9, Illustrator did it one better by adding effects like blending modes, feathering, and glowing edges.

With Illustrator 10, Adobe once again improves on features previously introduced in FreeHand, most notably Symbols and Envelope distortion. And Illustrator breaks new ground with improvements to some standard art tools, creating more-versatile selection tools and object-independent Styles.

When programs such as Macromedia Flash and FreeHand first introduced them, Symbols primarily served to make one object act as the parent or master for other objects: If you changed the parent, the other instances also changed. Although many people agreed that Illustrator needed to add a way to work with Symbols, few envisioned that the feature had much more to offer.

Illustrator 10's robust Symbolism tools go far beyond FreeHand's Symbols. Naturally you can use a Symbol as a master object to control many other objects scattered around the page. This is very helpful for cartographers or landscape artists who need to use the same object many different times on a page. Rather than

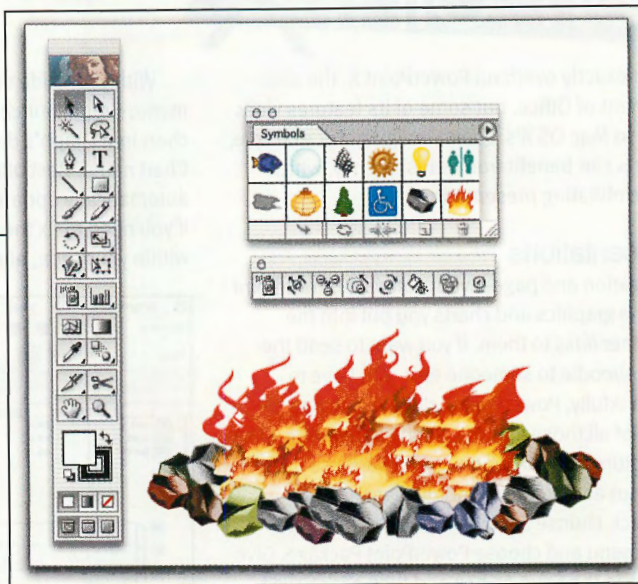
stop there, though, Adobe created a whole new way to work with Symbols. The Symbolism tools allow you to select a Symbol and spray it on the canvas with the Symbol Sprayer tool—for example, you can select the Sequoia Symbol and paint a forest in a couple of swaths, and still modify or replace them all (via the master Symbol) at any time. The Symbolism tools alone could have formed the basis of an entire application, so packing them into Illustrator 10 offers a genuine bonus.

It's taken Adobe a long while to match FreeHand's object-distorting Envelope commands, but Adobe has again upped the ante. In contrast to FreeHand's simple Envelopes feature, Illustrator has three different ways of distorting objects.

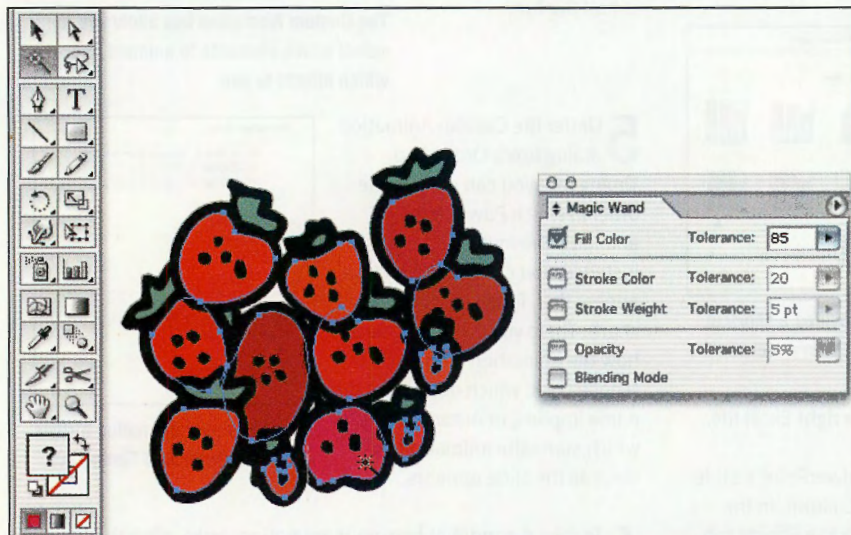
First, there are Illustrator's new Warp effects, which you control (with live previews) via dialog boxes and sliders. Applying and modifying these effects is extremely easy, and you can combine them for more variations. Best of all, you can save and store your effects in Illustrator's Styles palette and reapply them to other objects.

Second, Illustrator's version of FreeHand's Envelope tool allows you to use any object, including the standard preset shapes (such as Fish, Bulge, Squeeze, Arcs, and Shells), as the Envelope shape for a distortion. And you can modify Envelope shapes after you've applied them.

Illustrator has broken new ground in Envelope territory. Instead of just modifying the outside path of the Envelope, Illustrator's Envelope Mesh feature adds vector paths *within* the Envelope to give



This looks like a raging campfire, but it's really just a couple of replicated and modified Symbols.



Illustrator's new Magic Wand can select by more criteria than just the standard Fill Color, as well as select from multiple layers.

**FREAKIN' AWESOME!**  
The most valuable products, the coolest gizmos.

**SPIFFY**  
A solid offering. Overall a good investment.

**YEAH, WHATEVER**  
Neither recommended nor rejected. Some might like this, but we weren't impressed.

**BLECHI**  
Give us back the time we spent testing this.

**X**  
Compatible with Mac OS X or later.

**9**  
Compatible with Mac OS 9.x or earlier.



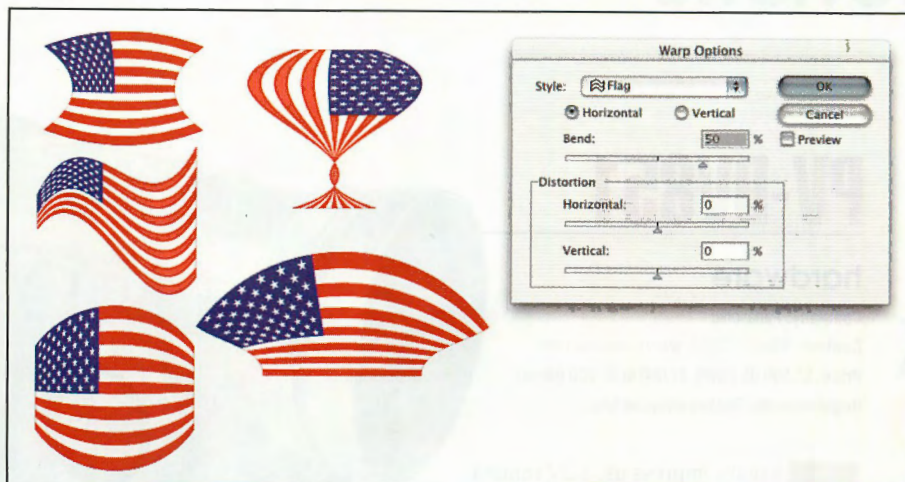
objects a 3D appearance—we used it to make flags ripple and to add waves to water.

Illustrator's selection tools and commands have needed improvement for quite some time. Rather than duplicate FreeHand's Graphic Search And Replace dialog box, the Illustrator team has created a Magic Wand selection tool. Anyone who has ever used Photoshop knows how this tool works—you select it and click a particular color to select similar colors. A low tolerance selects a limited range of colors; a higher tolerance selects a greater range. Illustrator's Magic Wand palette lets you set which attributes—Fill Color, Stroke Color, Stroke Weight, Opacity, or Blending Mode—the wand will select. Once you have selected one attribute, you can hold the Shift key to add more. The only thing the Magic Wand can't do is select by object shape.

The Magic Wand isn't the only set of commands for selecting objects; Illustrator 10 also adds a new Select menu with the Save Selection command. This means once you have worked hard to select a certain array of objects, you can save your selection in a command that appears in the Select menu.

Illustrator 10 also includes an impressive list of Web tools. For instance, you can slice up images and optimize each slice with individual settings before exporting them as GIFs or JPEGs for the Web. Even better, the Make Slice command creates dynamic slices that change size along with their parent object. You can then import the Illustrator object into Adobe GoLive, where the slices remain intact.

Although Scalable Vector Graphics (SVG) are still few and far between on the Web, Adobe has enhanced Illustrator's SVG support, so applying XML-based SVG filters



The Warp commands let you show your colors in all sorts of shapes—even custom ones you can save and reuse in other projects.

such as Gaussian Blur, Bevel, and Woodgrain is easy—you just select a filter from the SVG Filters list in the Effects menu. However, you still need to know XML to make your own SVG Filters, or JavaScript to create truly interactive SVG files—something most designers have little time or inclination to learn. We'd rather Adobe put its energy into beefing up Illustrator's Flash Export capabilities, which are still (understandably) a few versions behind FreeHand's.

Adobe has also added support for variable-data graphics that you can use with products such as AlterCast (Adobe's dynamic imaging server software). Once again, this is not a feature designers and artists sit up and beg for, but it's a plus for those who want to automate printing and Web-graphics production.

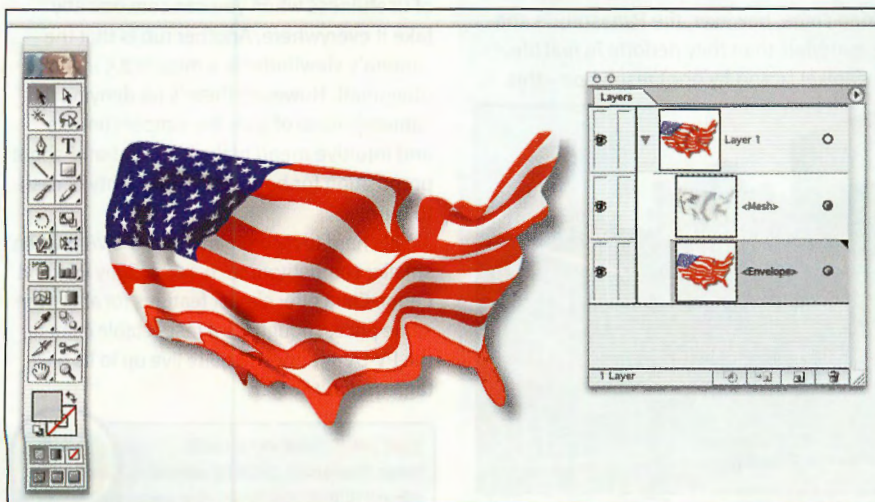
Illustrator 10 is the very first creation tool Adobe has Carbonized for Mac OS X. Adobe did a nice job of translating Illustrator to the new operating system. But a side-by-side

comparison of onscreen elements reveals that Adobe scrimped a bit on the yummy Aqua interface. Illustrator still uses the old modal dialog boxes instead of Aqua's Sheets, and the main Tools palette looks nearly identical to the one in OS 9—or in Windows 98. However, since Illustrator 10's native file format supports PDF, the OS X Preview application can open and display Illustrator files.

Finally, some of Illustrator 10's new features seem gratuitous, as if Adobe was simply padding the feature-comparison chart. How else to explain the Polar Grid, Grid, and Line tools? Perhaps some technical illustrators may find them useful, but not the average user. These tools hardly match the Lens Flare tool in the contest for most unnecessary tool introduced in Illustrator 10.

As if that weren't enough baggage, Adobe has added seven new distortion tools based on the distortion brushes found in Virtual Mirror's Vector Studio. These tools let you mush and push vector paths without regard for Bézier handles or anchor points. While the thought of manipulating paths just by pushing or pulling sounds attractive, the results are ugly and imprecise.

Although FreeHand has a few more layout tools such as multiple pages and master pages, when it comes to graphics and design, Adobe's advanced Symbolism, Style, and selection tools have allowed Illustrator to leapfrog way ahead of its competition.—Sande Cohen



We added a third dimension to the American flag with Illustrator 10's new Envelope Mesh, combined with Gradient Mesh shadows.

**good news:** Groundbreaking new Symbolism tools. Versatile Magic Wand selector. Excellent Web-graphics support. **bad news:** Still no support for multiple pages. No advanced SWF output. Some new tools are gratuitous.





## PV-DV851

### hardware

**Company:** Panasonic

**Contact:** 800-211-7262, [www.panasonic.com](http://www.panasonic.com)

**Price:** \$1,599.95 (SRP); \$1,000 to \$1,200 (street)

**Requirements:** FireWire-equipped Mac

**T**o really impress us, a DV camera has to be strong in three areas: form factor, image quality, and price. We want the option of capturing crystal-clear footage *anywhere*—and we want it at a price that doesn't break the freakin' bank.

Given this tall order, how well does the Panasonic PV-DV851 stack up? It's a thoroughly middle-of-the-road camera: Though small, it doesn't quite fit in a jacket pocket, so we're not likely to have it handy when inspiration strikes; and its image quality is good but not great. We could live with this camera's size and quality, but only if it came at half the sticker price.

Featurewise, the PV-DV851 has a lot to offer. It has a strong, fast zoom lens (10X optical, 100X digital), and it autoadjusts its focus and exposure to different light levels fast enough to capture outdoor action shots. We saw some noise in low-light



**Panasonic's PV-DV851 isn't a bad camera, but we've seen smaller, less expensive cameras with more features.**

shooting, but nothing excessive. The camera captures images via a single progressive-scan CCD (charge-coupled device), at over 500 lines of resolution. Real-world translation: In most situations you won't see a difference between the 851's image quality and that of a cheaper camera. You may notice a difference in comparison with images from cams with three CCDs, which produce more vibrant colors and sharper images overall, but three-CCD cameras tend to cost \$2,000 and up—way up.

Some other things we appreciate about the PV-DV851: It has a jack for an external microphone (essential if you expect someone to pay for your work), and an image-stabilization feature to minimize the effects of hand jitters (a plus if you've ever tried to hold the camera steady when it's fully zoomed in on a subject—this really does work). There's also a handy RCA-in jack (out too), which lets you record video (like favorite movies and old home videos) from your VHS deck or TV. From there, you can bring the new DV-formatted video into your Mac.

As for the PV-DV851's form factor, we wish it could easily fit in a jacket pocket or a PowerBook shoulder bag (for an ultramobile DV-capture and -editing rig). This may seem trivial, but a video camera gains a new level of usefulness when you can conveniently take it everywhere. Another rub is that the camera's viewfinder is a measly 2.5 inches (diagonal). However, there's no denying this camera's ease of use; the simple controls and intuitive menu make it a point-and-shoot proposition for hobbyists with plenty of cash to burn.

It's hard to recommend the PV-DV851 when smaller competitors such as the Sony PC9 and Canon Elura offer similar features for about the same price. Though it's a respectable camera, the PV-DV851 doesn't quite live up to its price tag. —Helmut Kobler

## How's It Work for Stills?

**L**ike many DV cameras, the PV-DV851 also takes still pictures, which is awfully tempting if you don't want to lug around both a video camera and a still cam (much less pay for both). As is true of most video cams, however, the Panasonic's still-image features sound better in the marketing materials than they perform in real life.

The PV-DV851 takes still pictures at a 1-megapixel (1,200 by 900) resolution—this looks fine on a computer monitor, but the print results are disappointing. What's more, the PV-DV851's optics and its color balancing and antinoise algorithms are not designed for still pics, so you pay the price in image quality.

Finally, using this camera for stills is just plain inconvenient. For instance, it offers a handful of still modes (Single Image, Rapid Burst, and so forth), but it doesn't provide an easy-to-remember way to call them up. Plus, there's no on-camera flash, and, given the camera's short battery life and clunky form factor, you're not likely to be ready for those spontaneous out-and-about shots.



**Like most video cameras, the DV851 has limited still-image capabilities.**

**good news:** Good image quality. Image stabilization. Jacks for external mic and RCA in. **bad news:** High price. Small viewfinder. Short battery life. Less than svelte.





# Fly II

## fun & games

**Company:** Gathering of Developers

**Contact:** [www.godgames.com](http://www.godgames.com), [www.flyii.com](http://www.flyii.com)

**Price:** \$895 (SRP); upgrades \$129 to \$349

**Requirements:** 350MHz G3, Mac OS 8.6 or later, 1.2GB free hard disk space, 128MB RAM, OpenGL compatible, 16MB RAM video card

**Recommended:** G4, 256MB RAM, 2GB free hard disk space, 32MB video card

**F**ly II is an unlikely candidate for a must-have title—it doesn't offer any gore or destruction, and you can't kick the crap out of your friends online. But Fly II will score a big hit with anyone who's ever had an urge to take to the sky (and who hasn't?). Lovingly designed aircraft, fanatically detailed scenery, and easily adjustable realism all combine to make this flight simulator an ace.

Fly II ships with a mercifully short manual designed to get anyone into the air in 10 minutes or less. A more-thorough PDF guide covers the basics of flight and the complete controls for all the aircraft, ranging from a single-prop Flyhawk trainer to a Peregrine jet—plus, new to the Fly series, helicopters! Notably absent, however, are instructions for loading real-world weather data and for accessing and using the built-in Scenery Editor. You can



Fly II puts you behind the yoke: It's almost as breathtaking—and difficult—as the real thing.

find those pieces of information in a separate read-me file and on the Fly II Web site, respectively.

When it comes to flight simulation, it's all about visuals and flight modeling—and Fly II delivers. You can manipulate all aspects of the plane (including cockpit noise and the plane's weight distribution and center of gravity) and most of the physics (such as how realistically the plane reacts to your controls and the weather). You can also change cloud cover and weather and download real-life weather conditions. The visuals are based on actual geographical data and photography, and they're truly stunning.

And the scenery itself is malleable (see "Painting with Pylons," below).

All this beauty and control comes at a cost, however. If you've been looking for an excuse to upgrade your video card, this is it. Enabling the high-resolution textures (an option when you start the game) requires a 32MB video card; even with low-res textures, our 16MB Rage Pro 128 strained at screen resolutions above 800 by 600. You also want to give the game as much RAM as possible; our G4's 384MB was barely enough. This is not a game for an iMac to take lightly.

Many aspects of Fly II are user modifiable. In addition to downloading real-time weather, historical weather, and geographical survey data, with Fly II's Adventure Scripting you can create scenarios that have specific goals, such as flying your Cessna under the Golden Gate Bridge. Terminal Reality (the sim's developer) includes detailed skylines for five cities, and users can save and share their own creations.

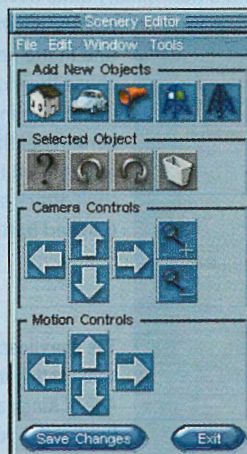
While all of this will make seasoned pilots feel right at home, this sim may overwhelm the casual armchair aviator. Fly II's quick-start documentation is good, but unlocking the game's full potential requires at least a passing familiarity with FAA terminology and regulations—or the willingness to learn. Trust us, it's worth the effort. Fly II is one of the finest noncombat flight sims available for the Mac or any platform.—Rich Pizor

## Painting with Pylons

**F**ly II's built-in maps of Frankfurt, Paris, Manhattan, San Francisco, and Washington, D.C., are extremely realistic, but we prefer customizing our environment via the Scenery Editor. Unfortunately, Fly II doesn't include instructions for using this feature, so you'll have to pay a visit to the company's Web site.

To access the Scenery Editor, first get your aircraft to the portion of the world you wish to edit. The Teleport function comes in handy here—find it by selecting Current Waypoint from the Flight Plan menu, and Other Waypoints from the resulting Directory screen. Type in your desired coordinates and press Command-E. A bird's-eye view of the ground and a palette of objects (including buildings, vehicles, towers, beacons, and any other graphics you imported) and tools appears. To add an object, position the camera and click the one you want from the list. In addition to generic buildings, Terminal Reality includes many notable structures, such as major sports stadiums and the Empire State Building.

Don't like the scenery? You can change it with the amazingly capable Scenery Editor.



**good news:** Gorgeous. Widely extensible. Runs well in OS X. Scalable realism. **bad news:** Resource hog. Amateurs may get lost quickly. Some features documented poorly or not at all.





## Age of Empires II: Gold Edition

### fun & games

**Company:** Bold by Destineer

**Contact:** 866-512-9111, [www.boldgames.com](http://www.boldgames.com)

**Price:** \$49.99 (SRP)

**Requirements:** 233MHz Power Mac, Mac OS 8.6 or later, 64MB RAM



War, demolition, faith conversion, farm trashing—just a day in the life of a conqueror.

The time is nigh to brandish your long swords and defend your civilization against invading hordes. The second installment of Age of Empires is here, combining The Age of Kings and its expansion pack—The Conquerors—into one masterpiece of real-time strategy. After you vanquish the great civilizations of history—now including the Mayans, Koreans, Huns, and others—you can retrace the paths of great conquerors like Genghis Khan or legendary leaders like Joan of Arc.

Unlike the original version, AOE II has the power of the pixel, with masterfully rendered 2D sprites and lush backgrounds; it's both detailed and practical—the characters leave footprints and show up as outlines when obstructed (a godsend in times of combat). An even more impressive element is the game's historical accuracy, as the buildings, people, and environments are true to the eras they represent. A history section is included to help you bone up on events portrayed in the game—a helpful strategy tool for cultures with limiting factors, such as the Aztecs' tendencies toward infighting. Although all the Dark Ages characters

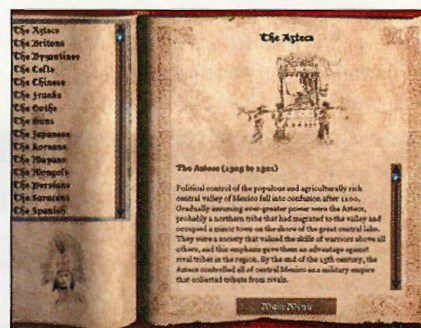
generally look alike, hearing them speak in their civilization's native tongue helps us forgive their generic appearance.

AOE II invites the casual gamer with a well-conceived tutorial game featuring the familiar story of Sir William Wallace (that guy in *Braveheart*). It's broken down into easy-to-understand sections, and the storyline and voice acting are engaging. For the expert, campaigns are highly customizable, with several difficulty settings and a map editor that allows you to, say, put the Celts in a palm-tree-ridden tundra. The game also offers variety in its objectives: You can create a wonder of the world, obtain relics, or simply force your enemies under your booted heel (our personal favorite).

Players of the original game will find AOE II's artificial intelligence far superior. Your workers are smart enough so that after they've used up their resources they seek out new materials and keep working. And when gumption fails, the Find Idle Peasant function helps you keep your peons busy and your empire functioning smoothly. Sometimes military units become too

lose track of errant, bloodthirsty units. A smarter default state would help preempt such behavior.

AOE II rocked our world, but it's not perfect: We experienced random application crashes and other bugginess in Mac OS 9. A patch (available at the company's Web site) cured most of the problems, but the game continued to crash occasionally on quitting and after we won campaigns. However, this didn't affect gameplay in any serious way. For gamers looking to the future, this game runs like a dream in Mac OS X. AOE II also plays well online (via GameRanger), adding even more value.



Bone up on your history if you slept through World History 101—you'll form better strategies.

One warning: AOE II will consume hours of your life. You will play for so long that when you close your eyes, you'll see arrows flying. In short, whether you're an avid gamer or simply a dabbler, you must have this title.—Leslie Brown and Matt Osborn



aggressive, however, and in the heat of the chase they follow enemies blindly into certain death. We remedied this by changing their attack status, but in a frenzied battle, it's easy to

The storylines and voice acting from the Age of Kings and The Conquerors scenarios add a new depth to AOE II.

**good news:** Great tutorials. Customizable. OS X perfect. Smarter than previous version.  
**bad news:** Small bugs in OS 9. Will eat up your life.





# Super Mini Optical Mouse

## hardware

**Company:** Atek

**Contact:** 714-258-0110 or 888-889-9990,

www.attek.com

**Price:** \$49.95 (SRP)

**Requirements:** Mac OS 8.6 or later, USB port

**W**ith a name like Super Mini Optical Mouse, the first question is, naturally: How small is it? Answer: It's smaller than a pack of Bubble Yum.

Obviously, this isn't the mouse for extended fragging sessions in Unreal Tournament—or even for everyday use. It's just too small. But for travelers, this mouse packs easily (a drawstring pouch is included) and is small enough to use on an airplane tray-table (using your 'Book's palm-rest as a mousepad). In use, a raised band across the middle helps you stay oriented as to which way is up.

Atek also had the sense to adorn this mouse with a superthin USB cord: It's about one-third the girth of most mouse cords and a proper three feet long. The mouse itself toes the fine line between supersvelte stowaway and chintzy flyaway, but we got used to its featherweight handling.

Atek's driver provides basic speed control and options for programming the mouse's two buttons (so you can modify clicks, emulate keystrokes, or open items), but only in Mac OS 8.6 through 9.x. The Super Mini works in Mac OS X: The second button defaults to a Control-click (opening a Contextual Menu). We can live with that, but



PHOTOGRAPH BY W. B. JONES

**We know people with thumbs bigger than Atek's Super Mini Optical Mouse.**

as with most single-sensor optical mice, no amount of software-tiddling cured the cursor from stuttering and/or going haywire when we moved the mouse quickly, regardless of which Mac OS we used.

We usually avoid absolutes, but this is hands-down the smallest mouse we've ever seen, which at least partially redeems its average mousing performance.

—Niko Coucouvanis

**good news:** Small. Very small.  
**bad news:** Looks like a lipstick case. Mediocre mousing. Light weight may discombobulate.



# gallery 1740

## hardware

**Company:** Formac

**Contact:** 877-436-7622, www.formac.com

**Price:** \$899 (SRP)

**Requirements:** Power Mac G4 with ADC video port (or DVI port with optional powered ADC-to-DVI adapter with USB port—available for \$49)

**W**hen a new and improved technology hits the market, we early adopters expect to pay a premium, right?

Not this time. The Formac gallery 1740 display takes advantage of the most advanced LCD technology yet to hit the market, and it's a cool hundred bucks less than the current LCD leader, the 17-inch Apple Studio Display.

We don't have room here for a thorough discussion of how the gallery 1740's Multidomain Vertical Alignment (MVA) Fujitsu display panel improves upon the tried-and-true thin film transistor (TFT)

technology used in Apple's Studio Display, but when we put the two 1,280-by-1,024-pixel digital displays side by side, the difference, although subtle, was apparent.

The most prominent distinction lies in video performance. Formac claims its MVA pixel response to be 10 to 25 milliseconds, in contrast to Apple's TFT response of 40 milliseconds. The difference is minor, but our eyes gave the gallery 1740 a perceptible edge in smoothness and image definition when viewing fast-paced, high-contrast video.

That said, the gallery 1740 isn't perfect: Its adjustable but flimsy rear foot (the display stands on three feet) and protruding



PHOTOGRAPH BY W. B. JONES

**The Formac gallery 1740 display is bigger, brighter, and faster than the competition—oh, and cheaper as well.**

pair of USB ports smack of immature industrial design. Also, small amounts of backlighting bled through the corners of exceptionally dark images (we used a fully black Photoshop file in our testing).

But these shortcomings—though annoying—are just quibbles. The gallery 1740 is big, bright, fast, and affordable. Aren't you glad you waited for the latest and greatest?—Rik Myslewski

**good news:** Bright, color-accurate, wide-angle display. Good price.  
**bad news:** Immature industrial design. Some backlight bleed-through in corners of dark images.





## LiveStage Pro 3

### multimedia



**Company:** Totally Hip Software

**Contact:** 604-685-6525, www.totallyhip.com

**Price:** \$899.95 (SRP), 199.95 (upgrade)

**Requirements:** 333MHz Power Mac or faster,  
Mac OS 8.6 or later



Find a demo  
of LiveStage  
Pro 3.0.1  
on the Disc.

When Apple added interactivity to the QuickTime format, several products, including LiveStage, Abvent's Katabounga, and Electrifier's Electrifier Pro, cropped up, providing new ways for media authors to create interactive QuickTime content. Even in its first iteration, LiveStage was the leader of the pack. To find a feature set comparable to LiveStage Pro 3's, you'd have to look at full-blown authoring suites like Macromedia's Director, REAL Software's REALBasic, or Runtime Revolution's Revolution.

LiveStage Pro 3 is a QuickTime authoring tool, but it isn't a video editor. Like Director, LiveStage allows you to combine video, Flash, images, and sounds to create interactive presentations. LiveStage gives you the option of creating QuickTime files in either 4.x or 5.x format; 4.x allows you to reach a larger audience, whereas 5.x enables you to use the latest features (such as Media Skins) in projects.

New users will find LiveStage a powerful and relatively easy-to-use tool. The application uses a track-based timeline

interface. You can add text, video, sound, pictures, or sprite tracks to the timeline and arrange them in layers to determine which items show up in front of others. You can also edit your project's elements linearly on the timeline, so they begin or end at specific points in the final movie's playback.

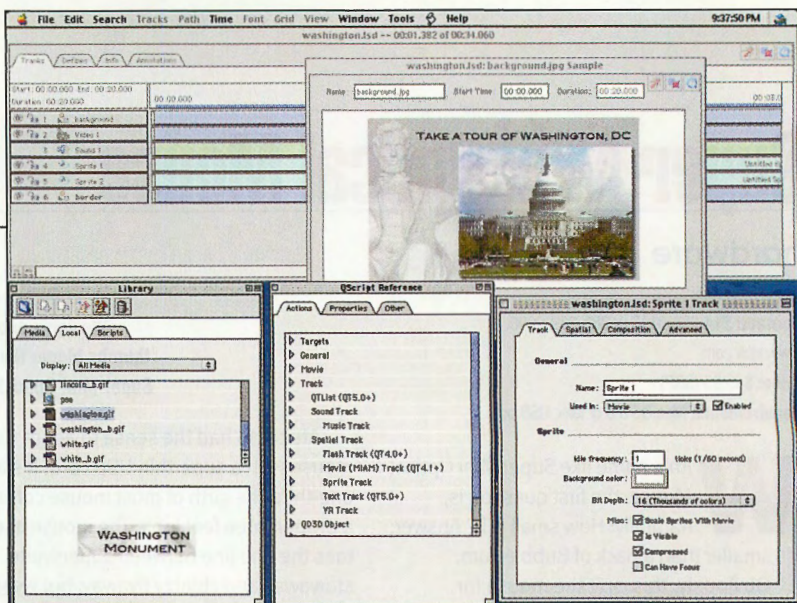
If you're working on a nonlinear project in LiveStage, you can control the interactivity of your project using QScript, a proprietary scripting language similar to languages like Director's Lingo. QScript lets you program the actions, reactions, and interactions of media and sprites in your projects.

All of your media and scripts reside in libraries for quick access. Each project has its own library, but if you use a lot of the same images over and over again or have a piece of QScript that frequently comes in

handy, you can keep it in the persistent Media or Scripts pane of the Library and access it from within any project.

The big news about LiveStage Pro 3 isn't about refinements to existing functionality, however—it's about new features. Users of earlier versions will find that LiveStage 3 offers compelling reasons to upgrade. For one, it runs swimmingly under OS X. The user interface isn't quite as snappy as it is in earlier Mac OSs, but if you have a good amount of RAM (say, 256MB) and a fast processor, the difference is negligible.

Another hot new feature that will have QuickTime authors jumping for joy is LiveStage's ability to create complex QuickTime Media Skins. With version 5, Apple gave QuickTime users the opportunity to skin the player with a customized look.



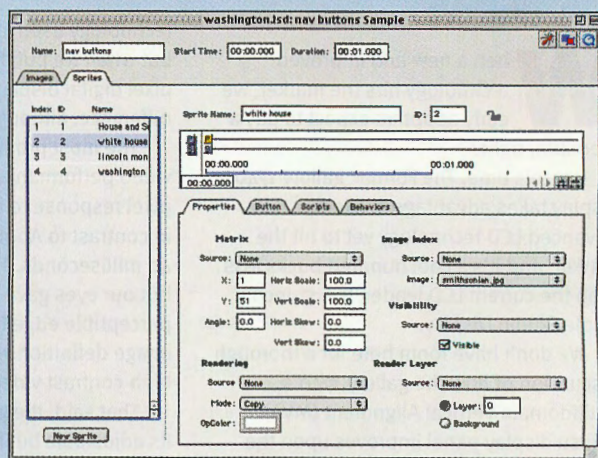
**LiveStage Pro 3 turns your bland old QuickTime movies into interactive applications that will run on any machine—Mac or PC—that has QuickTime installed.**

## Wire My Sprite

If you've never created interactive QuickTime or worked in an application like Director, LiveStage Pro has a surprise for you—a new kind of media element called a *wired sprite*. Simply put, this is an image or animation with interactive features. The most apparent example of a wired sprite in an interactive movie is a button.

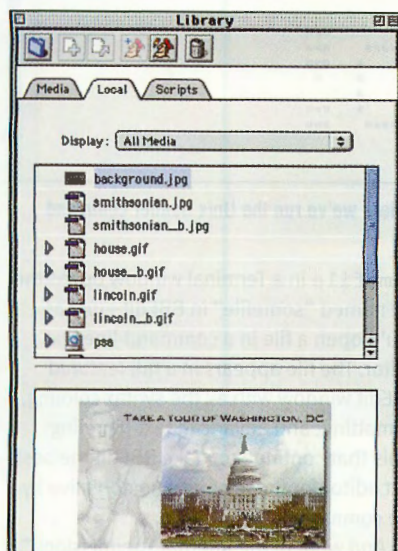
Starting with a simple image—an arrow, for example—you can program a button to display different images on its surface when the user's cursor rolls over and clicks the button. You can also assign an action, such as play or stop for controlling movie playback, to the button. The sum of these images and the associated action is a wired sprite. LiveStage Pro includes hundreds of prewired sprites to get you started, and you can apply the precoded actions to imported artwork or to your own design.

**The Sprite Sample window is where you define your sprites' parameters and program their actions and behaviors.**





But you can achieve more with LiveStage than a simple facelift—you can create full-blown custom players, complete with links to Web sites, custom play buttons, and rotating ad banners in a fully customized player window.



The Library window keeps your project's images, sounds, and movies handy—even across multiple projects.

Version 3 also improves LiveStage's integration with Macromedia's Flash (.swf) format. QuickTime itself doesn't yet support Flash 5, so LiveStage is limited to Flash 4 compatibility, but you can include Flash 4 media in your LiveStage projects and make them interact with other elements.

Power users will find the new XML and database-connectivity features compelling. LiveStage doesn't exactly make this advanced programming easy for novices, but with a little perseverance (and some help from LiveStage's excellent manual), you can create XML documents that dynamically generate content or even movies. You can also create movies that connect to online databases or CGI scripts. Both of these features require more than a passing knowledge of XML or database techniques, so unless you already have that experience, expect to face a challenge.

Possibly the most important improvement to LiveStage Pro 3 lies in its user manual. Totally Hip did a fantastic job of updating the manual with new tutorials and documentation on all of the new features—including a boatload of new wired actions (see "Wire My Sprite,"

p50). We didn't try all of the new actions, but incorporating them into our projects was a snap thanks to the manual's thorough instructions.

As much as Totally Hip has improved LiveStage, we have a complaint. Both Library and QScript Reference (a dictionary for QScript) are floating windows that hover in front of any other open windows. We like to keep both open all the time, but at 1,024 by 768 resolution, the crowded screen made us feel claustrophobic. Sure, you can minimize these windows, but an option to turn off their floating attribute would be nice.

Our biggest complaint about the product is its high price. At \$900, you have to be pretty serious about creating interactive video to make such a substantial investment. That said, if you want the very best tool for making wired QuickTime movies, LiveStage Pro 3 is it.

—Rick Sanchez

**good news:** Lots of new features. Thorough manual. **bad news:** Expensive. Slows down under OS X. Consumes lots of screen real estate.



# HipFlics 1.1

## multimedia

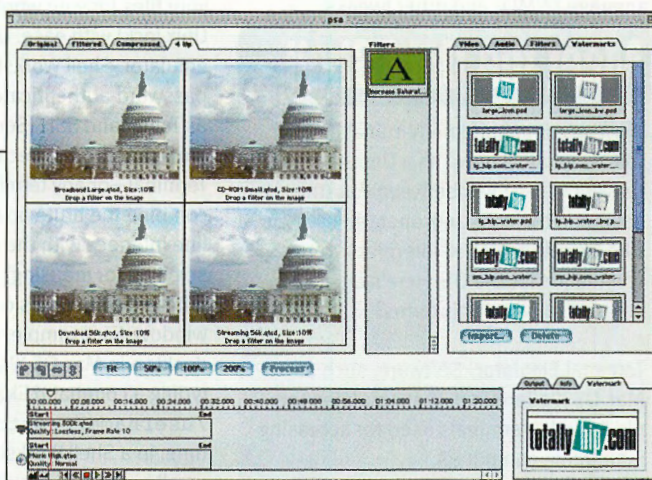
**Company:** Totally Hip Software

**Contact:** 604-685-6525, [www.totallyhip.com](http://www.totallyhip.com)

**Price:** \$99.95 (SRP)

**Requirements:** 333MHz Power Mac or faster, Mac OS 8.6 or later, 20MB of RAM

**Low-budget filmmakers, rejoice! HipFlics is the ticket to affordable, versatile QuickTime compression.**



compression preview feature alone merits a *Freakin' Awesome*. You can look at up to four different compression previews side by side before you waste an hour compressing your movie with the wrong codec. HipFlics is also easy to use. Its interface is similar to iMovie's, so even your Uncle Bob the Luddite can figure it out.

HipFlics has its limitations. If you're looking to output files in any other format, like Windows Media or Real Media, you'll have to look elsewhere. HipFlics' speed may also be an issue for advanced users: Though it's only a tad (6 percent) slower than Cleaner using basic QuickTime

compression codecs like Sorenson 3 or Video, compressing with the Sorenson Developer Edition codec took almost twice as long in HipFlics as in Cleaner 5.

If you only work with QuickTime and you're looking for a better way to compress your movies for Web or CD delivery, HipFlics is an outstanding choice—at about a fifth of the price of competing products.

—Rick Sanchez

**good news:** Low price. Feature packed. Four-up compression previews. **bad news:** Supports only QuickTime-movie output.



Used to be that if you wanted to compress a movie, you had only one choice: Media Cleaner Pro, which we now know as Cleaner 5. For years it was the only way to exercise sophisticated control over video compression. Finally, starving moviemakers have a powerful, inexpensive alternative in HipFlics 1.1.

Totally Hip says HipFlics does for video compression what iMovie does for video editing, but that doesn't do this little app justice. Take a look at this feature list: support for all QuickTime 5 video codecs (including Sorenson 3, VP3, and Zygovideo), support for multiple video codecs in a single QuickTime movie, preset or manual compression settings (with preview!), batch processing, cropping, rotating, drag-and-drop filters, and watermarking. The



Find the HipFlics 1.1 demo on the Disc.



## BBEdit 6.5.1

### productivity

**Company:** Bare Bones Software

**Contact:** 781-687-0700, [www.barebones.com](http://www.barebones.com)

**Price:** \$119 (SRP), \$39 (upgrade), or free if you purchased

BBEdit 6.1 between August 1 and December 31, 2001

**Requirements:** Power Mac, Mac OS 8.6 or later

**B**BBEdit has been the all-purpose, all-powerful text editor for nearly ten years—we use it exclusively to write, tweak, and manage our Web site. Version 6.5 brings BBEdition closer to the Unix core of Mac OS X by way of better Unix-script support and the `bbedit` command, which you can use to access BBEdition from within OS X's Terminal. And for both Mac OS 8.6 to 9.x and Mac OS X users, the upgrade brings better search-and-replace functions; support for more Web languages, such as Cascading Style Sheets (CSS), Java Server Pages (JSP), and Wireless Markup Language (WML); and other tweaks.

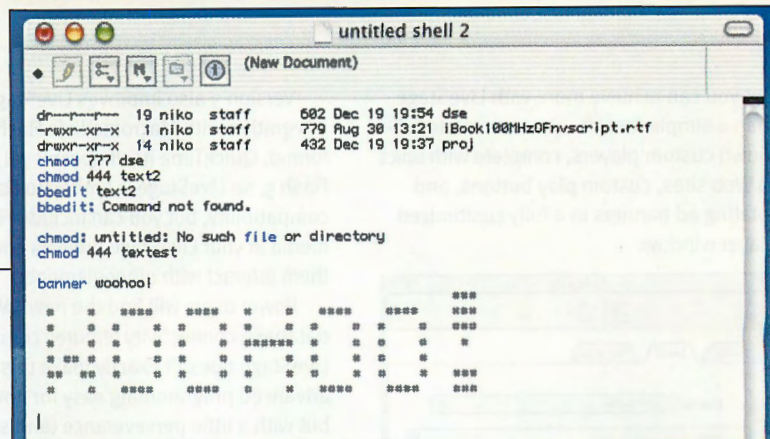
### Meet the Unix Shell

**T**he command-line Terminal in OS X is what's known as a Unix shell—think of it as a layer between you (the user) and the core Unix operating system (the kernel); the shell interprets your commands for the OS. Here's a short glossary of other Unix terms:

**Terminal Emulator** Software, such as Mac OS X's Terminal, that emulates the old "dumb" terminals used for accessing mainframe computers.

**Kernel** The core services of an operating system. Mac OS 9's System Folder is a kernel.

**Grep** Evolved from a string of Unix commands (global/regular expression/print) which searches for patterns (regular expressions) in text. Examples of grep include basic search options such as case sensitivity or searching for more than one concurrent letter; another example is (`<img [^>]*src\s*=\s*"([^\"]+)"([^\"]*>]*>)*`).



BBEdit is much more than just a text editor: Here we've run the Unix Banner command within a BBEdition window.

BBEdit became Mac OS X-friendly back in April 2001 with its 6.1 release, and version 6.5 is even more X-friendly—it can run Perl and shell scripts, or scripts of any Unix scripting language you install on Mac OS X.

The fun doesn't stop there. What if you could run just bits of scripts—Unix commands (think command-line interface)—in BBEdition? That's what BBEdition's new Shell Worksheets feature is for (see "Meet the Unix Shell," left). Like a terminal emulator, Shell Worksheets execute many Unix commands, so you can micromanage your files (or your whole system, if you're a Unix jock) with ease. Unlike a real terminal emulator, Shell Worksheets can't access password-authenticated Unix services such as Telnet and SSH (Secure Shell). Shell Worksheets rock, because unlike OS X's Terminal—or any terminal emulator—they combine the brute power of the command-line interface with the convenience of scrolling (or mousing) to and selecting different commands or lines in the session window. For example, navigating to the desktop in Mac OS X's Terminal requires typing a command like `cd/Users/username/Desktop/` every single time. In a Shell Worksheet, you can always scroll back up to previously entered commands and reenter them by line or by highlighted selection.

The possibilities are huge. Aspiring Perl hackers can run a series of commands (to test subroutines or other pieces of a script) by selecting the appropriate chunk of code in a Shell Worksheet and pressing Enter. Of course, the downside to this powerful tool is that it's just as easy to screw up your system as it is to remove a file—if you're new to the Unix shell, approach with caution.

Still more OS X integration comes in the new `bbedit` command, which evokes BBEdition from a Terminal window; typing `bbedit`

some file in a Terminal window opens the file named "somefile" in BBEdition—just as you'd open a file in a command-line text editor. The file appears in a full-featured BBEdition window with all the syntax coloring, formatting, and advanced text-handling tools that continue to make BBEdition the best text editor for those of us who don't live by the command-line interface.

And what of the infernal "permissions" Mac OS X is always nagging you about? Anytime you try to modify a document that's not write enabled, BBEdition offers to make the file writable—provided it's yours or you have administrator privileges. And yes, you can change the file's permissions in a BBEdition Shell Worksheet instead (again, only if you have the appropriate privileges).

Geeks, rejoice—Bare Bones rebuilt the grep engine behind BBEdition's awesome text-pattern search function around the PCRE (Perl Compatible Regular Expressions) library, so it's more powerful and flexible than ever. The downside is that it works very differently from the plain-vanilla grep in the BBEdition of yore, so you need to rewrite your old search patterns. The new grep engine—along with other search-and-replace refinements, and broadened support for Web languages—all benefit both the Mac OS X and the Mac OS 8.6 to 9.x sides. Unfortunately, those who don't use Mac OS X and aren't grep or CSS junkies won't find much in this update.

The only people who'll jump on this upgrade faster than OS X geeks are wannabe OS X geeks. That's because BBEdition is an excellent learning tool, and it's capable of managing the most unruly Web site.—Niko Coucouvanis

**good news:** Support for Cascading Style Sheets. Improved grep searching. Unix integration on OS X.  
**bad news:** No Save As key command. Not much new for OS X-phobes.



spiffy



# LaCie DVD/CD Rewritable Drive

## hardware

**Company:** LaCie

**Contact:** 800-288-9919, [www.lacie.com](http://www.lacie.com)

**Price:** \$699 (SRP)

**Requirements:** G3 or later, Mac OS 9.x or later, 128MB RAM, FireWire port

On the surface, LaCie's latest external FireWire drive looks much like the rest of the company's current lineup: boxy and blue-faced, a no-frills, no-nonsense device. But pop the hood, and you'll see what's special about this drive. Lurking behind the faceplate is none other than a Pioneer DVR-103—yes, that DVR-103—the same mechanism Apple calls SuperDrive in high-end Power Macs.

In case you haven't been paying attention, Pioneer makes the drive—Apple

calls it Super because it does everything short of walking your dog. It reads, writes, and rewrites CDs at 24X, 8X and 4X, and DVDs at 4X, 2X, and 1X, respectively.

So what's a super drive like the DVR-103 doing in this inconspicuous LaCie casing? Sadly, it's (still) waiting for an independent third party to come up with DVD authoring software for those of us who can't spare \$999 for DVD Studio Pro. That's right: Apple is the only game in town, and if you think you can use Apple's free iDVD and save the \$999, think again. iDVD only comes bundled with new Power Macs—the ones with SuperDrives built in—unless Apple brings it to the masses à la iMovie.

We burned DVDs and DVD-RWs via

Roxio's Toast Titanium (\$99.95, [www.roxio.com](http://www.roxio.com)), but they were only boring data DVDs that probably won't play in most commercial DVD players like Apple-mastered ones do. Mac OS X users are limited to CD burning via Apple's built in Disc Burner; as of this writing, neither Toast nor DVD Studio Pro are OS X-friendly.

There's no bones about it, this drive is the cat's pajamas. If you've got the software, it's a state-of-the-art digital lifestyle accoutrement.

—Niko Coucouvanis

**good news:** Works just as well as a SuperDrive. **bad news:** May be more drive than you need.



All dressed up with nowhere to go; software would make LaCie's DVD/CD Rewritable Drive super.

# DAVE 3.1

## utilities

**Company:** Thursby Software Systems

**Contact:** 817-478-5070, [www.thursby.com](http://www.thursby.com)

**Price:** \$149 (SRP), \$89.95 upgrade (or free if you purchased DAVE in 2001)

**Requirements:** Power Mac, Mac OS 8.6–9.x or Mac OS 10.1 or later, 64MB RAM (128MB RAM for OS 10.1 or later)

DAVE has long been the savior of Macs in PC environments. We like DAVE because it lets us easily plug into Windows file-sharing networks from our friendly, familiar Macs. Network administrators like DAVE because they can support Macs without using AppleTalk and without reconfiguring their Windows servers.

Version 3.1 is the first Mac OS X-friendly DAVE iteration, but it includes a separate Mac OS 8.6 to 9.x version. Even though OS X (as of version 10.1) can log onto Windows servers on its own, DAVE still has plenty to

**DAVE makes cross-platform file and printer sharing ridiculously easy.**

offer OS X users. For one, DAVE is bi-directional, which means that in addition to enabling Macs to log onto Windows, machines, and Linux servers running SAMBA, it also lets Windows users access Mac shared files and PostScript printers. The OS X version includes support for inkjet printers (even USB ones), but that support is still missing from the OS 8.6 to 9.x app. And no, you can't sneak around the limitation via OS X's Classic environment.

Browsing Windows networks is simple using the PC-standard WINS and NetBIOS protocols over TCP/IP. Without DAVE, you have to type in the server's IP or domain address; DAVE adds a DAVE icon to OS X's Connect To Server dialog—clicking it displays



a list of available Windows servers. In the OS 8.6 to 9.x version, there's a DAVE Client in the Chooser.

DAVE 3.1 adds some other new features to both apps, including support for file names longer than 31 characters and automatic detection of Windows network workgroups. Add these to DAVE's 10-minute setup and ease of use, and you've (still) got the best way for a Mac to join a PC file-sharing network.—John Rizzo

**good news:** Cross-platform file and printer sharing. Shares USB inkjets in OS X. Super easy to set up and use. **bad news:** OS X required for USB inkjet sharing.



X  
9

X  
9

Find the DAVE 3.1 trial on the Disc.



## Strata 3Dpro 3.6 Rich Media Edition

### design & graphics

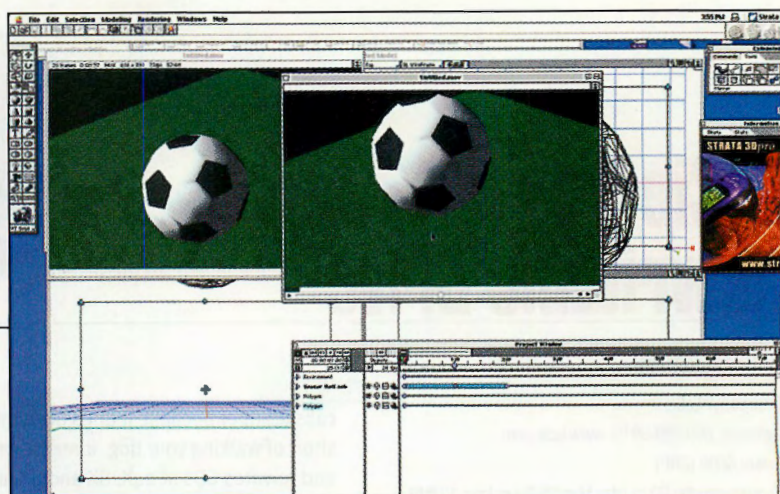
9

**Company:** Strata

**Contact:** 800-787-2823 or 435-628-5218, [www.strata.com](http://www.strata.com)

**Price:** \$895 (SRP); \$129 to \$349 (upgrades)

**Requirements:** Power Mac, Mac OS 8.6–9.x, 128MB RAM



Strata's tools make short work of modeling and animating your 3D world.

In a world where many 3D software developers, such as Discreet and Softimage, choose to ignore the Macintosh platform altogether, Strata continues its long-time support with the release of Strata 3Dpro 3.6 Rich Media Edition. Among the highlights of this new release are advanced Boolean operations for intersecting models; ready-to-use textures and effects; Bézier editing tools for modifying 3D shapes; and a brand-new, built-in Flash exporter courtesy of Swift 3D.

The Strata 3D product line is a three-tiered affair: at the low end is the free Strata 3Dbase software. This package includes the basic Strata 3D engine, but lacks many of the middle- and high-end features found in the midrange Strata 3Dplus and the top-of-the-line Strata 3Dpro RME. If you're already familiar with the base or plus versions of Strata 3D, you've got a good head start on the pro version. Beneath the surface, however, Strata 3Dpro packs a wealth of extra features, including fire and smoke effects, realistic hair effects, a long list of texture maps (and procedural texture effects), and, most important, the Swift 3D Flash exporter.

At the heart of Strata 3Dpro is a powerful 3D modeler, which you can use to create and modify 3D objects of all shapes and sizes, either in a traditional polygonal environment (by reshaping individual polygons) or by using Bézier curves (like those found in traditional 2D applications such as Freehand and Illustrator). In either mode, you can transform simple (primitive) objects into complex shapes and fit them together with other shapes to create even more complex models. Also, Strata 3Dpro offers a long list of construction tools, such as Boolean functions, path extrusions, metaball modeling, and polygon skinning. Most of the modeling tools are easy enough to use, but many basic tools (such as the lathing tools) are needlessly complicated and offer unwelcome challenges.

Strata 3Dpro also offers a 3D-animation environment where you can put your models into action. The animation feature set includes all the traditional tools, such as a keyframe-based timeline, animation paths, and bones-based animations for creating realistic organic modifications (mostly used for character animation). Also included is an inverse kinematics system,

which enhances the process of bones-based animation by applying modification effects to all the bones in a connected chain. Although the animation tools are reasonably comprehensive, Strata 3Dpro is still more powerful as a modeler than as an animator.

**Preparing your models as Web-ready Flash files is a snap with the versatile Swift 3D exporter.**

One of Strata 3Dpro's most gratifying features is its long list of built-in textures and environmental effects. Where many 3D packages leave you to create your own textures in a separate software package (such as Photoshop), Strata includes a boatload of textures to help you create realistic stone effects, bricks, and wood, to name just a few.

One of the most exciting advanced features is the built-in Swift 3D Flash exporter. At the click of a button, 3D artists can now create accurate vector renderings of their scenes and animations, ready to post on the Web. The exporter includes support for shadows, several shading styles, and cartoon-style outlines.

Strata 3Dpro RME is easy to include in the shortlist of high-quality 3D packages available for the Mac, and there is very little in the world of 3D that you can't do with it. However, with more than a few tool-control issues, Strata does take a little getting used to.

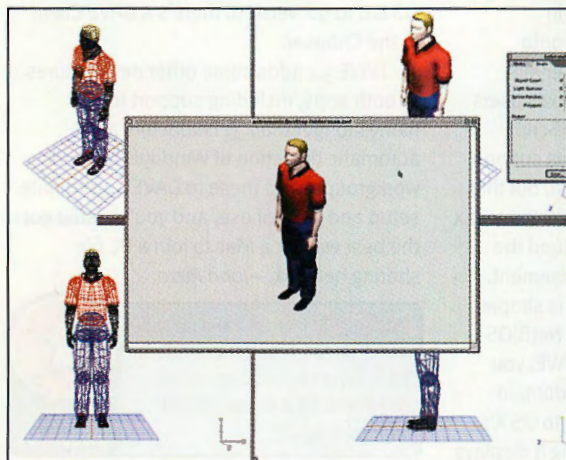
—Patrick Baggatta

**good news:** Long list of advanced features. Built-in Flash export.

**bad news:** Awkward controls for many basic tools.



spiffy



## Drivers Wanted

If your G4 is one of the models with the GeForce 3D Accelerator, you may need to update your drivers before Strata 3D will operate properly. The updated drivers are in the GeForce Graphics Card Update 2.1.1 package. You'll know that you need the new drivers if the picture on your screen jitters in your viewport windows when you're trying to do any kind of dragging operation.

You can download the update free from the Support section at [www.apple.com](http://www.apple.com).



# AirPort Base Station

## hardware

**Company:** Apple

**Contact:** 800-795-1000 or 408-996-1010, [www.apple.com](http://www.apple.com)

**Price:** \$299 (SRP)

**Requirements:** Any Mac with an AirPort card and antenna or IEEE 802.11b-compliant wireless card; Mac OS 9.0.4 or later, or Mac OS 10.1 or later

**Clearance Clarence:** The new AirPort Base Station opens the door to sharing an Internet connection—with up to 49 of your closest friends.

(Network Address Translation), which conceals your real IP addresses from the outside world; and port mapping, so you can leave selected IPs accessible for Web hosting or online gaming.

We plugged a virgin Base Station into our Ethernet (DHCP) network, and moments later it appeared in our iBook's list of available AirPort networks—there was no step two. Of course, we immediately fired up the included AirPort Admin Utility software and put the kibosh on unauthenticated access.

After a quick and painless (and well-documented) setup, the Base Station auto-dialed and divvied up an AOL connection between our wireless iBook and a couple of

Ethernet-wired Power Macs (hub required) all at once. Granted, one 56K Internet connection split three ways is arguably more trouble than it's worth, but AirPort can also split cable and DSL connections, including the common DHCP and PPPoE variety.

The Base Station is on the pricey side, even for a combo wired/wireless broadband router, but AirPort's ease of use more than compensates.

—Niko Coucouvanis

**good news:** 128-bit encryption.  
**Built-in** firewall, router, and Ethernet bridge. Supports AOL.  
**bad news:** Relatively pricey.

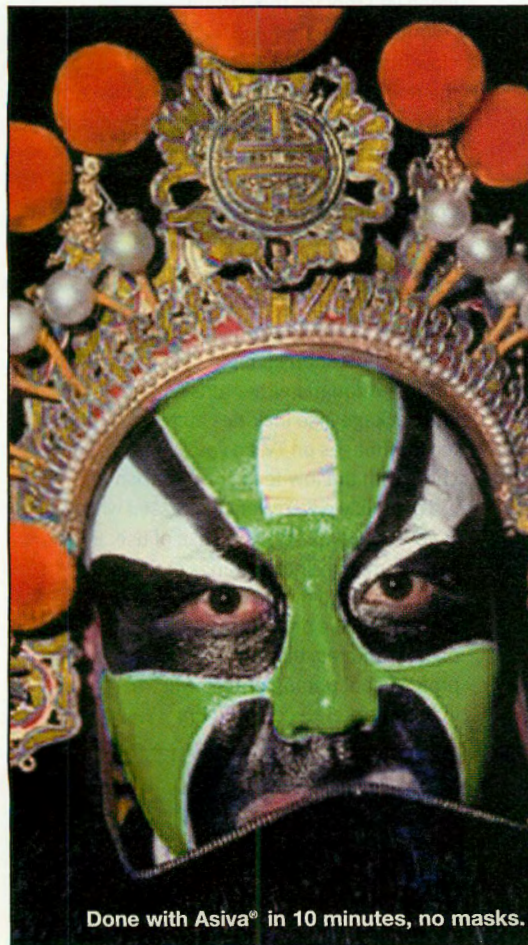


X  
9

**W**e've been AirPort fans since day one (see *Reviews*, Feb/00, p46), and with the new Base Station, Apple gives us even more to love.

How much more? For starters, the Base Station now supports up to 50 simultaneous connections—genuine WiFi-certified 802.11b connections, so PC users can officially get in on the party.

Other impressive new features include 128-bit data encryption; support for roaming between multiple Base Stations on a network; a built-in firewall, courtesy of NAT



Original



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**SOME MASKS ARE A WORK OF ART. OTHERS ARE A WASTE OF TIME.**  
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photo



## Olympus Camedia D-40 Zoom

### hardware

**Company:** Olympus

**Contact:** 888-553-4448, [www.olympusamerica.com](http://www.olympusamerica.com)

**Price:** \$599 (street)

**Requirements:** G3 or faster, Mac OS 8.6 or later, USB port

The little D-40 packs a whopping 4-megapixel sensor into a svelte, easy-to-use form.



PHOTOGRAPH BY W. B. JONES

**W**ith the Camedia D-40, Olympus raises the proverbial bar for prosumer digital cameras. Weighing in at a slight 8.7 ounces, the 4-megapixel D-40 is about the size of your fist, and thanks to its smart design and ergonomically arranged controls, it's perfect for one-hand shooting. Despite its light weight, the D-40 is solid enough to withstand inevitable knocks and tumbles.

The maximum image resolution is 2,272 by 1,704 pixels; this produces high-quality images you can save as uncompressed (11.1MB) TIFF files or JPEGs at a variety of different quality (compression) settings. You can also capture short QuickTime movies and record audio in WAV format using the built-in microphone.

Our test shots came out crisp and vivid, with very little noise in the shadow areas. The colors were well saturated and the highlights held up even in high-contrast situations. The camera has adjustment controls for fine-tuning sharpness, color and white balance, contrast, and other image-quality settings, but the default settings worked well in most situations.

The camera ships with a 16MB SmartMedia card that holds up to 165 pictures at the maximum compression—but only one uncompressed TIFF—or up to 148 seconds of QuickTime video at 15 frames per second. We only wish Olympus hadn't picked SmartMedia for the D-40's storage; CompactFlash is a much more versatile and economic choice. Either way, 16MB isn't nearly enough memory for a 4-megapixel camera, so be prepared to upgrade. One useful extra is a charger with a few NiMH AA batteries—this baby eats batteries (regular AAs as well as the included, nonrechargeable Lilon) like we eat Jelly Bellies: *fast*. Especially if you use the bright (1.8-inch) LCD display, you'll quickly realize how much money you can save by using rechargeable batteries.

The D-40 sports an f-2.8 to f-4.8 Olympus glass lens with a 2.8X optical zoom (equivalent to a 35mm to 98mm lens on a 35mm camera). For additional magnification, the D-40 features a 7X digital zoom, which enlarges individual pixels rather than the whole picture and thus lowers the image's quality. Olympus pushes enlargement even further with

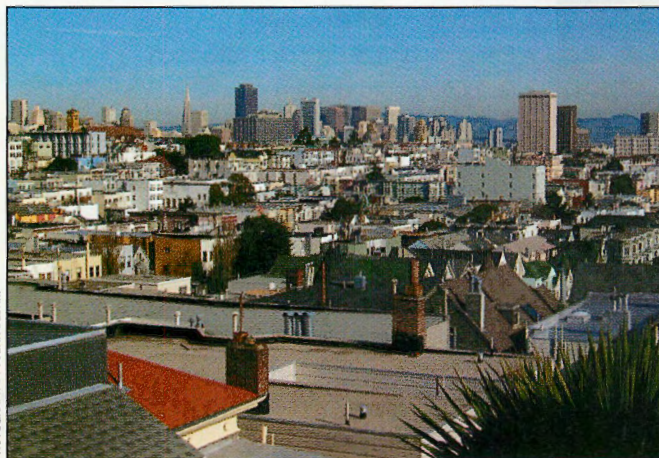
Optimum Image Enlargement mode, which interpolates the 4 megapixels up to 7.6 (3,200 by 2,400 pixels) at the time of capture.

The main command wheel offers seven preset modes (Self Portrait, Night Scene, Landscape, Landscape Portrait, Portrait, Full Automatic, and Program), plus a half-automatic A/S/M setting you can configure for complete manual control of the camera. The user-definable My Mode setting is outstanding. It let us predefine everything from aperture control to zoom length, and the settings remain in the camera's memory even when you replace the battery.

Another outstanding feature is a second slow function for the flash. Slow 2 syncs on the rear curtain, meaning it fires at the end of the exposure rather than at the beginning. This keeps motion blur behind the subject.

The supplied USB cable and Auto-Connect makes image transfer swift, since there is nothing to install—in Mac OS X or earlier supported versions. Also included is Camedia Master, Olympus's own panorama-stitching, portfolio-organizing software, plus Adobe Photoshop Elements for image editing—though neither runs natively in OS X. The package also includes an NTSC AV cable to view images on TV, so you can share your shots with the low-tech crowd back home.

Overall, we were very impressed with the D-40's image quality and ease of use. Even considering its shortcomings in terms of battery life and media format, as well as the shutter-release delay that plagues most digital cameras, this camera's the one professional photographers will want to have in their pockets.—Joern Blohm



PHOTOGRAPH BY JOERN BLOHM

This big-ass landscape looks great—good thing, since only one uncompressed TIFF fits on the camera's included memory card.

**good news:** Great image quality. Well designed for easy, comfortable use. **bad news:** Only 16MB of memory (SmartMedia) included. SmartMedia sucks.





# Backyard Basketball

## fun & games

**Company:** Infogrames

(Humongous Entertainment division)

**Contact:** 425-485-1212,

<http://us.infogrames.com/index.html>

**Price:** \$19.99 (SRP)

**Requirements:** 233MHz G3 or faster, Mac OS 8.1-9.x, 64MB RAM, 4X CD-ROM

**B**ackyard Basketball has all of the makings of a good kids game—it's action-packed, it offers a lot of customization options, it promotes diversity and sportsmanship, and it's based on a sport that many kids love. But at the end of the day (or in this case, the fourth quarter), Backyard Basketball falls a little short on the fun meter.

Backyard Basketball gives you the chance to play a three-on-three pick-up game of hoop. Reminiscent of the horrors of

**Pick the members of your team carefully, and you could make the backyard playoffs.**



high-school gym class, you alternate with your opponents to pick kids to play on your team. Each kid has certain strengths and weaknesses—one may be a great outside shooter, while another may be a good defender. The key is to round up a diverse group that will make your team strong. You can play either a single game or a season of 18 games plus playoff games, if you're lucky.

All of that is great. The problem comes with the game's control scheme. You use the mouse to move players, shoot, defend, and rebound, but sometimes the game is difficult to control with the mouse. For instance, we repeatedly violated the five-second rule

when attempting to in-bound the ball because we couldn't click one of our moving teammates fast enough. This leads to a lot of frustration (good thing you can't get a technical foul for yelling profanities at the computer). As you might guess, not being able to even get the ball in play, along with other difficult control issues, really put a damper on the fun.—Cathy Lu

**good news:** Lots of cool customization options. You get to build your team from scratch.  
**bad news:** Game is difficult to control with a mouse.



# Monsters, Inc. Scream Team Training

## fun & games

**Company:** Disney Interactive/Pixar

**Contact:** 888-895-4988, [www.disneyinteractive.com](http://www.disneyinteractive.com)

**Price:** \$29.99 (ESP)

**Requirements:** 233MHz G3 or faster, Mac OS 8.6 or later, 32MB RAM, 8X CD-ROM

**I**f, like us, you adored the movie *Monsters, Inc.*, you might feel a bit let down when you play Scream Team Training. The movie set a high bar with its beautiful graphics and engaging story line, and this kiddie game for the five-and-up crowd just can't compete. That said, it's still a fairly solid game for young ones.

You play one of six monsters-in-training, performing various odd jobs around the Monsters, Inc. factory. Jobs include parking

**Babysitting monster tots is just one of your jobs at the Monster, Inc. factory.**



cars in spaces of the right color and size (yawn), assembling food orders for your monster cohorts (not quite fun but strangely addictive), and babysitting monsters. One of the better activities involves matching countries to their spoken languages—for instance, when you hear the word “merci,” you should click the French flag.

Most activities do not reflect the story line of the namesake movie although several do. For example, in one game you search for the door behind which the little girl Boo is hiding; in another, your job is to file papers in the correct order, which doesn't have much to do with the movie.

And that's the problem—the game is only loosely based on the film, and your favorite characters just make cameo appearances.

As if Steve Jobs had some kind of influence on the matter (oh, wait a minute), the game runs well in both Mac OS 9 and Mac OS X. And to be fair, a number of the games are fun. They're just not as mind-bogglingly cool as we hoped.—Cathy Lu

**good news:** Cool monsters. Lots of varied activities. **bad news:** Most games don't reflect the movie story. Some activities aren't fun.





# Vampire: The Masquerade

## fun & games

9

**Company:** MacSoft

**Contact:** 212-726-6500, [www.wizworks.com/macsoft](http://www.wizworks.com/macsoft)

**Price:** \$39.99 (SRP), \$30 (street)

**Requirements:** 300MHz G3, 128MB RAM, Mac OS 8.6-9.x, 765MB free hard disk space, Rage 128 video card with 8MB VRAM

**Recommended:** 400MHz G3, Mac OS 9.1, 256MB RAM, 1,085MB free hard disk space, 32MB video card

Part action, part RPG, Vampire represents the missing link leading to a new style of gaming.



**V**ampire: The Masquerade—Redemption is almost as schizophrenic as the creatures of the night that populate its pixels. Just as Christof, the game's central character, cannot reconcile his crusader soul with his vampire form, the game cannot make up its mind whether it's a single-player action game or a multiplayer role-playing game (RPG). The end result is as brilliant in some places as it is uneven in others.

As a single-player experience, Vampire follows the story of Christof, a knight templar who falls in love with a nun, becomes a vampire, and rises to power in the world of the night. The game is set in four chapters: Dark Age Prague and Vienna, and modern-day New York and London. Each realm is reasonably expansive and populated with a wealth of player characters and nonplayer characters (NPCs).

MacSoft built the game on the Quake III engine, but apart from the familiar texture mapping and slick particle and lighting effects, you'd never guess it; the interface and controls opt for Diablo II's point-and-click directness. Sadly, the NPCs' artificial intelligence (AI) doesn't quite live up to its Quake III roots; your allies trip over one another to attack the same foe, and your enemies periodically walk right past you without noticing. The click-on-your-target method of combat is sometimes harrying during rumbles in tight corners—your allies can obscure your target, and since vampires are denizens of the city, confining rooms and alleys are all too common.

As a multiplayer RPG, Vampire forges new ground. One player serves as the Storyteller, placing key objects in the game world (including relics, medallions, and blood-plump rats) and flitting back and forth between the NPCs. The other players are just that—players in the Storyteller's tale. This Storyteller-player setup recreates

the feel of sitting around a kitchen table with your friends, rolling dice. Sadly, Nihilistic Software (the game's original developer) isn't releasing the Vampire software-development kit for the Mac—this drastically limits your options for creating a unique multiplayer experience (see "Vampire Mods," below). And since cross-platform networking isn't an option, your virtual kitchen table can only accommodate your Mac-using friends.

Still, beneath these rough edges lies a gaming gem. The single-player story of love between a demon and a nun is conventional yet not entirely predictable, and the multiplayer game, while limited, opens new doors for computer RPGs. Vampire is a harbinger of excellent things to come.—*Rich Pizzor*

**good news:** Intriguing story. Good implementation of game mechanics.  
**bad news:** No cross-platform networking. Limited game-modification options.



## Vampire Mods

**T**he lack of a software-development kit means Mac storytellers can't change the game to accommodate new aspects of their Vampire worlds. You can, however, find usable PC mods at [www.fileplanet.com](http://www.fileplanet.com) and [www.planetvampire.com](http://www.planetvampire.com).

**Skins** Vampire ships with only a handful of skins, greatly limiting the options for your character's appearance. We highly recommend picking up the Skins Galore pack ([www.fileplanet.com/index.asp?file=59549](http://www.fileplanet.com/index.asp?file=59549)), which includes 250 skins to add some diversity to the characters.

**Maps and Chronicles** While individual maps typically cover only one room or general location, a chronicle is a series of maps composing an entire world. Chronicles are created in either NOB or NMF format. As of this writing, GameRanger recognizes only those Internet games using NMF files, but you can use either format for LAN games.



Hang out in the sewers, and you might find a juicy rat to sate your bloodlust.



# PSC 950 Multifunction Printer

## hardware

**Company:** Hewlett-Packard

**Contact:** 800-752-0900, [www.hp.com](http://www.hp.com)

**Price:** \$399.99 (SRP)

**Requirements:** Power Mac, Mac OS 8.6 or later, USB port

**T**he PSC 950 Multifunction Printer is a home-office worker's dream come true. A real workhorse that even functions as a stand-alone device, it can print, fax, scan, and copy while your Mac is turned off or otherwise engaged. But the PSC 950 is also a bit standoffish, as its drivers and software generally don't play well with the attached Mac.

We loved the PSC 950's copy speed: In draft mode, public library-quality photocopies took less than 15 seconds to print (that's four pages per minute). Multiple copies of the same document printed even faster. The LCD display on the printer gives you control over scan quality, copy scaling, and many other options. You can also just slap a sheet on the flatbed and press the Black or Color copy button to use default settings.

Color copies take longer, obviously, but the Best color-quality setting produces impressive results. A color copy we made on Kodak photo paper of a *MacAddict* cover

Easy on the eyes, the PSC 950 is a real workhorse—especially as a stand-alone because of its uncongenial software.

gave us great color detail, with only a few problems: pixelated shadows and dot-heavy color bleeds. No banding appeared in larger, undetailed areas (such as the "Addict" text) and some of the contrast in the copy looked better than in the original—fabulous results for a multifunction inkjet.

The scanner's specs stack up well: 36-bit color and 600 by 1,200 optical resolution, with software enhancement taking that to 9,600 dpi. The flatbed handles letter and A4 paper, but not legal size, which would be nice for reducing two pages of a larger book to a single page or for copying legal documents. Press the PC Save button, and the printer scans directly from the flatbed to your Mac. You can even tell the device, via its LCD, to scan images into AppleWorks or to recognize text documents and feed them to applications

as editable text via the included OCR software. Of course, you can also control the device from your Mac, fine-tuning your scan's color, resolution, and other settings via the included HP Scan software.

Faxing from a flatbed device is often less than pleasant, but the PSC 950 can store up to 50 pages in memory, so you can scan multiple pages first, then fax them in one session. From start to finish, it took us about 5 minutes to fax ten pages—first swapping pages on the flatbed, then dialing the fax numbers on the Mac. Faxing is easier with a sheet feeder, but for that you'd need to either downgrade to a multifunction device that doesn't feature a flatbed (such as HP's \$249 OfficeJet v40xi), or upgrade to HP's G85 (\$499), which offers a flatbed *and* a sheet feeder.

Software is the 950's weakest link. In Mac OS 9.2.1, the driver made a brand-new PowerBook G4 crash happy, and, believe it or not, simply running the HP Director software in the background seemed to cause the mouse pointer to vibrate. The included Mac OS X drivers failed to install in OS 10.1, but HP shipped us a fix, which should be available by the time you read this.

The PSC 950 even has a cool gee-whiz feature: It can print photos directly from digital-camera memory cards. Overall, what keeps us from giving the PSC 950 our highest rating is its slightly high price tag and its flaky drivers and software. Assuming HP stays on top of the driver issue, the PSC 950 is a great anchor for your home office. —Todd Stauffer

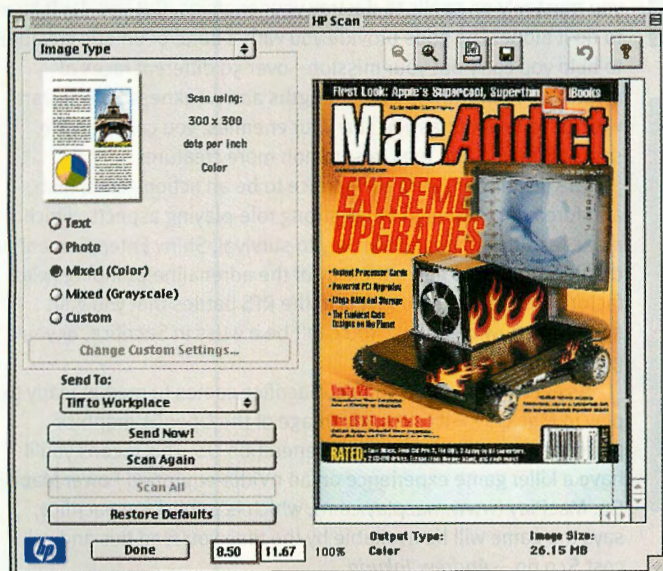
**Multifunction Printer Addict?** Heck, no, but we have grown awfully fond of the PSC 950's performance.

**good news:** Great color quality. Stand-alone features. Fast.  
**bad news:** Iffy drivers. Pricey.



PHOTOGRAPH BY W. B. JONES

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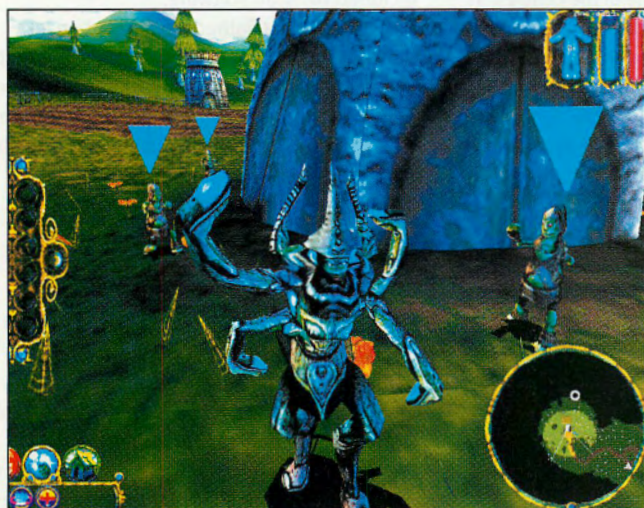


# powerplay

Where history repeats itself.



Your first order of business in *Sacrifice* is to choose your very own god. Hm...which one will do right by me?



The goons of *Sacrifice* have their hands full...



As a wizard in *Sacrifice*, you can cast protective spells around magic fountains.



## The Ultimate Sacrifice

*Choose God. Conjure Spells.  
Summon Monsters. Slay Enemies.*

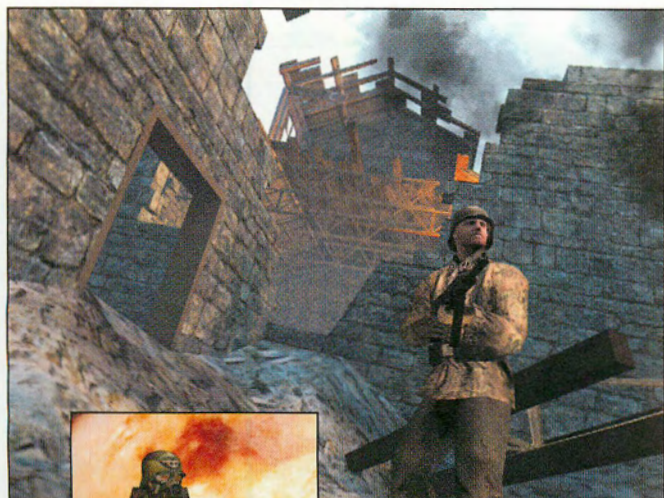
**S**acrifice is one of the most highly anticipated games to come to the Mac, and with good reason. It appeals to two hard-core gaming crowds: real-time strategy (RTS) lovers and role-playing game (RPG) enthusiasts. Call *Sacrifice* an RTS game with RPG elements, if you will. But we're also talking about a game with rich graphics, dramatic music, and that unique sense of style and humor that can only come from the developers at Shiny Entertainment ([www.shiny.com](http://www.shiny.com)), makers of *MDK* and *Giants: Citizen Kabuto*.

In *Sacrifice*, you play a wizard, cast into campaigns and scenarios to please your gods. Because of your limited strength, you must rely on spells to destroy your enemies. But you don't have to do it alone. The gods provide you with a band of unique creatures to help you carry out your mission—over 50 different races of creatures, each with its own strengths and weaknesses. You start with just a few, but as you slay your enemies, you can steal the souls of friends and foes to summon more creatures.

The developers wanted *Sacrifice* to be an action game, first and foremost. Although it has strong role-playing aspects, which make resource management key to survival, Shiny Entertainment didn't want that to get in the way of the adrenaline-pumping twitch factor of real-time gaming. It is in the RTS battles that you gain spells and new creatures. You can't be a wuss in *Sacrifice*, or you'll get pounded.

As every good game should, *Sacrifice* comes to market ready to play in Mac OS X—it takes advantage of the OpenGL graphics performance in Apple's newest-generation OS. This means you'll have a killer game experience on an nVidia-equipped Power Mac G4. MacPlay ([www.macplay.com](http://www.macplay.com)), which is publishing *Sacrifice*, says the game will be available by the time you read this and will cost \$49.99. —Andrew Tokuda





SS troops (top) and venom soldiers (left) are hunting you down at Castle Wolfenstein.

## It's Time to Kick Some More Nazi Ass

*Wolfenstein Returns to a Castle Near You*

**F**irst there was Castle Wolfenstein, the Muse Software game developed for DOS (yes, DOS), then popularized on the Apple II. Then there was Wolfenstein 3D, id Software's remake of the game. And now there's Return to Castle Wolfenstein. Developed by Activision and published for Mac by Aspyr Media, this first-person shooter pits you, U.S. Army Ranger B. J. Blazkowicz, against Nazi leader Heinrich Himmler, who's looking to bioengineer an army of undead to defeat the Allies.

Sound creepy? Well, it is. First you bust free from your imprisonment in Castle Wolfenstein. Then you complete 7 missions and 27 levels—battling SS soldiers armed with MP40s, Elite Guards armed with silent guns, Venom soldiers armed with flamethrowers, and other vile (un)humans. The game offers awesome graphics and a historical mission anyone can get behind. Classic and Carbon versions of Return to Wolfenstein should be available by the time you read this.—Narasu Rebbapragada

## Holy Peripheral!

*Two Good Reasons Not to Play with Mice*

**P**laying games with a mouse and keyboard can be frustrating, so peripheral maker Saitek strives to make your gaming experience more proficient with two innovative new game controllers.

For gamers with limited funds, Saitek's SP550 USB Stick and Pad Fusion (\$29.95, [www.saitek.com](http://www.saitek.com)) puts an end to the joystick-versus-gamepad conundrum. The pad portion features six buttons, two shoulder triggers, and an eight-way D pad that you can snap off the stick; the stick features seven fire buttons, a trigger, a slider throttle, and an eight-way hat switch.

If burning rubber is more your gaming style, the R440 USB Wheel (\$79.95) provides plenty of tire-gripping control (four steering-column buttons, two gearshift paddles, and gas and brake pedals). It also has a feature for the future: force feedback, which enables the steering wheel to respond physically to onscreen road conditions, such as driving across crunchy gravel or oil slicks. Though no Mac game at press time currently supports the technology, force feedback is the next anticipated development for driving games of the future.

—Narasu Rebbapragada

Drive off with the R440 USB Wheel, and you'll be ready when force feedback comes to Mac games.



This gamepad-and-joystick combo lets you have your cake and eat it, too.



## SCREENSHOT OF THE MONTH

Hey Larry, y'know that bolt you had that was left over?



THE RIGHT WAY



PLAIN WRONG

### Artist's Statement

These two 4X4 Evo screens demonstrate the difference between hitting the ramp correctly and hitting it wrong.—Paul Smith

Send your best screenshots to [letters@macaddict.com](mailto:letters@macaddict.com) with the subject line "Screenshot of the Month" if you crave fame, glory, or just satisfaction in seeing your screenshot in print.



# how to

Get to know your iBook really well.

## Upgrade Your iBook

by Niko Coucouvanis



This stuff's for the pros.



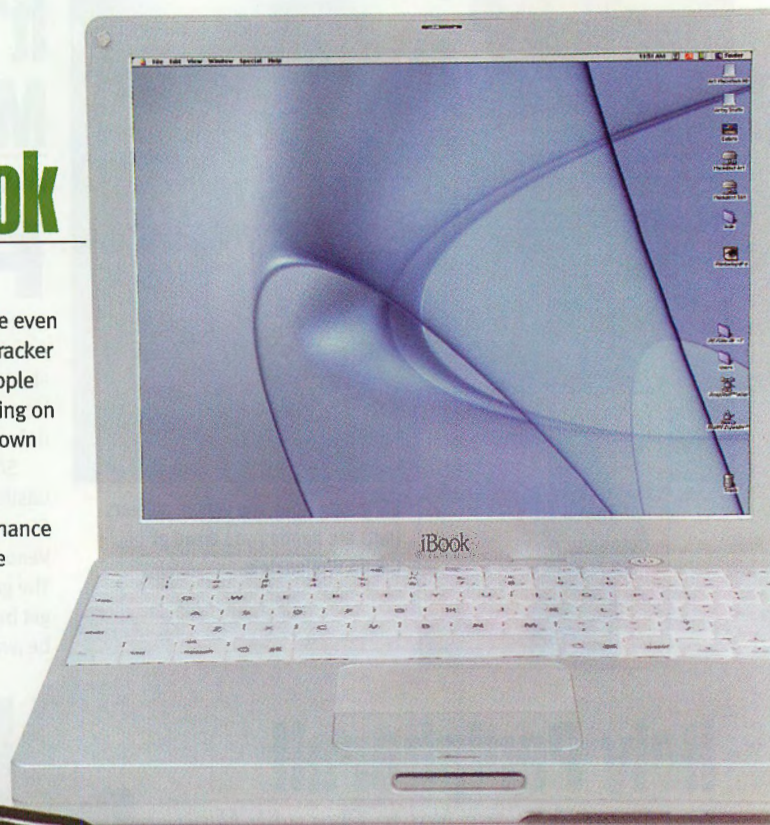
It'll take some effort, but you can do it.



The fundamentals, if you will.

**Y**ou just bought a shiny new iBook, and before you've even had the privilege of christening it with Coke spills, cracker crumbs, and that inevitable first scratch, good ol' Apple introduces a new, faster, souped-up iBook. Before you get going on a tirade, thinking your prized possession is obsolete, settle down and listen up. You can boost your iBook's specs with a few upgrades—how far you choose to go is up to you.

Here, we show you how to install RAM in your iBook to enhance its performance and how to install a larger hard drive for more room to store your stuff. And for you hard-core, determined, extremist professionals, we demonstrate how to overclock your iBook's processor to get faster speeds. (Warning: Overclocking your processor will surely void your iBook's warranty. Please keep this in mind as you plug in that soldering iron!)



Get out your toolkit and make your iBook smarter, faster, and more capable with these three upgrades.

### In This Section

#### p63 Just the RAM, Ma'am

Installing more memory is one of the easiest ways to get extra performance from your Mac. For iBook owners who panic at the thought of (gasp!) removing a single screw, we take you through the extremely simple process of installing RAM.

#### p64 Hop Up the Hard Drive

Tired of burning your work onto CDs just to free up extra hard-drive space? Why not install a bigger hard drive instead? We show you how, step by step.

#### p66 Insane Upgrade (If You Dare)

If you're a gutsy, highly skilled soldering master with a lust for processor speed, you can overclock your iBook processor—we show you how. Be forewarned: This is not for the beginner, the occasional electronics tinkerer, or those who adhere to rules.

### Important! Read Me! (Our BFD)

**T**hat's short for Big Fat Disclaimer. The only thing easier than falling in love with an iBook is voiding its warranty. Apple doesn't even suggest that you install RAM yourself, much less put in a hard drive. If Apple gets wind of any motherboard hijinks you attempt, forget about ever receiving—under warranty or not—service or sympathy from Apple or any Apple-authorized technician (or us, for that matter). Translation: If you decide to attempt the following three upgrades, you are doing so under your own volition and you are solely responsible for your own actions. Though our upgrades worked smashingly well on our iBook, we're providing these tutorials for infotainment only—do not try these at home unless you're willing to assume full responsibility.

PHOTOGRAPHY BY W. B. JONES



# Just the RAM, Ma'am



## WHAT YOU NEED

- SO-DIMM memory chip (any MB quantity)
- Small flathead screwdriver
- Small Phillips screwdriver



Use a jeweler's Phillips screwdriver to snake out those tiny screws.

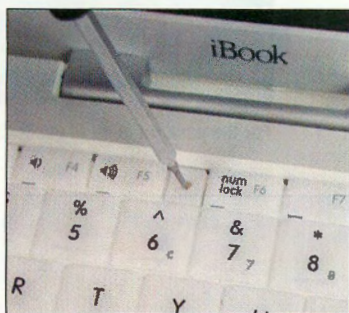


A 512MB DIMM—Ginkgo biloba for your iBook.

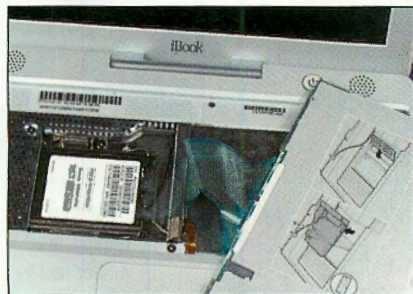
Installing RAM is one of the most basic upgrades. Depending on the revision, your iBook will have either 64MB or 128MB of SDRAM (synchronous dynamic RAM) on the motherboard, and a single SO-DIMM (small outline dual inline memory module) slot for adding additional memory. Many iBook resellers sweeten the deal by throwing in an extra 128MB of memory. While this is a good start, why limit yourself to 256MB when you can stuff up to half a gigabyte into that one DIMM slot and max out at 640MB? Extra RAM is essential if you're a gamer, you do graphics-intensive work, or you use your iBook for audio recording. Here's how to install more memory in an iBook—our 512MB DIMM comes courtesy of Other World Computing ([www.fastermacs.com](http://www.fastermacs.com)).

## 1 Safety First

Before you start, remove the battery, disconnect the power supply, and lay the patient on an antistatic surface such as a wood table or antistatic mat. Unlock the keyboard by turning the screw to the left of the Num Lock key (directly on top of the indicator light) with a tiny flathead screwdriver.



Use a teensy flathead screwdriver to unlock your iBook keyboard.



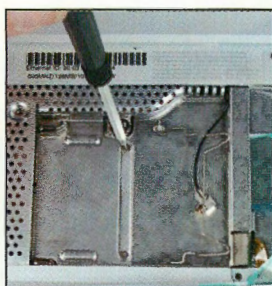
Don't pull too hard on the keyboard when you remove it—it's attached to your iBook via a rather short cord.

## 2 Remove the Keyboard

Use your fingernails to slide down the two release tabs (one is to the left of the F1 key, the other is to the right of F1), and lift out the keyboard, top edge first. Lay the panel upside down across the palm rests and trackpad. Next, don an antistatic wristband or discharge yourself by touching the perforated metal plate.

## 3 Remove the Riser

If you have an AirPort card, first remove it by unlatching the bracket and unplugging the antenna from the front edge of the card (large tweezers or small needle-nosed pliers help here). Pull the plastic tab to unplug the card, slide the card out, and put it somewhere safe. To expose the DIMM slot, remove the two Phillips screws from the AirPort riser and pull out the riser.



Remove these two screws and pull out the AirPort riser to expose the DIMM slot.

## 4 Remove an Existing Chip

If you don't have a chip in the DIMM slot already, proceed to step 5. Otherwise, use a small flathead screwdriver to push the support clips located on both ends of the memory chip outward; the chip will spring up at a 30-degree angle. Grasp the chip lengthwise and pull it up evenly to remove it. (Note: Don't touch the gold connectors or you could seriously damage the chip.)



Press here to release an existing chip from its DIMM slot.



Install your new chip in the slot at an angle, and then press it down to lock it into place.

## 5 Snap In the New Chip

Carefully push your new RAM chip into the vacant slot at a 30-degree angle until it snaps into place, flush with the slot. Then press the chip's raised edge down until it snaps in flat, with its edges under the clips. Reinstall the AirPort riser (and the AirPort card, if applicable), put the keyboard back into place, pop in the battery, and boot up—that's it! If your new RAM specs don't appear, either you didn't wedge the DIMM all the way into its slot (go back and check your work), or you got a bum chip.



## Hop Up the Hard Drive



### WHAT YOU NEED

- New 9.5mm hard drive
- 2mm hex key (or Torx #6)
- Small flathead screwdriver
- Small Phillips screwdriver
- Tweezers or small needle-nosed pliers

Hex key, Allen wrench—whatever you call it, this is what you need.

The hard drive is one area where you can leapfrog right over Apple's best offering. As of this writing, the biggest hard drive you can get preinstalled in a new iBook is 30GB. However, Toshiba's 40GB Super Slimline hard drive is currently the biggest drive made to fit the iBook's 9.5mm height clearance—we got ours from Other World Computing for \$297.99.

This procedure is time-consuming and *will* void your warranty if you go it alone. If that scares you, consider having an Apple-authorized technician (such as one at your local CompUSA) do the transplant for you.

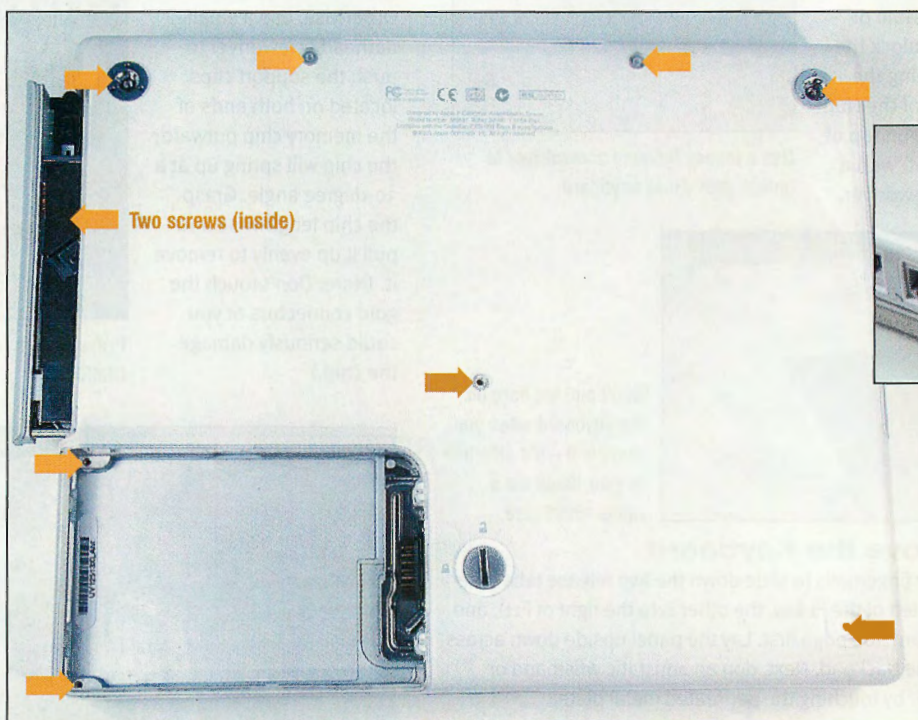


For the pack rat in all of us: Toshiba's hefty 40GB hard drive.

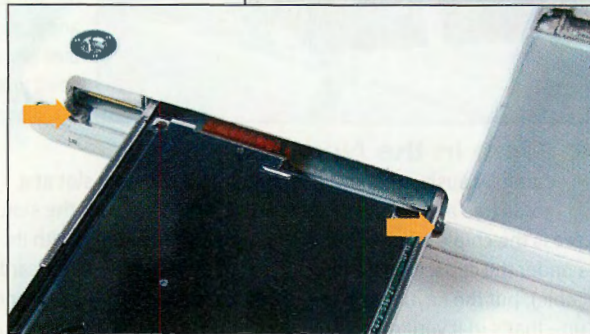
### 1 Remove the Screws

Remove the battery and power cord. Then remove all the screws from the backside of the iBook, using the hex key and the Phillips screwdriver accordingly, and stow them safely away. The iBook has three visible screws in back and seven hidden screws: three under the rubber feet, two inside the optical drive bay (CD drive), and two in the battery compartment.

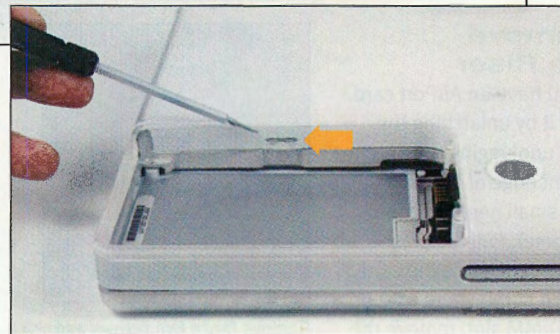
Remove all ten screws from your iBook's backing—don't forget the hidden ones.



To get at the hidden screws, remove the rubber feet by prying them out of the metal rings with a small flathead screwdriver.

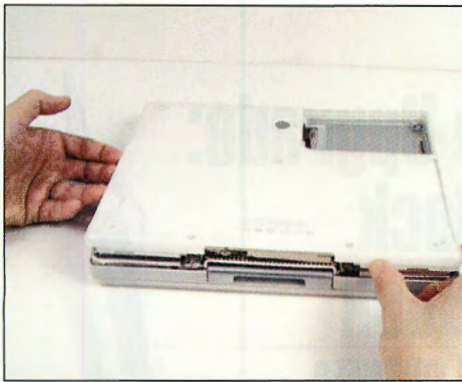


Pop open the CD drive using a paper clip, pull the tray out fully, and remove these two screws using a small Phillips screwdriver.



Be careful when you use that clip in the battery bay to remove the plastic, or you may break the latter.

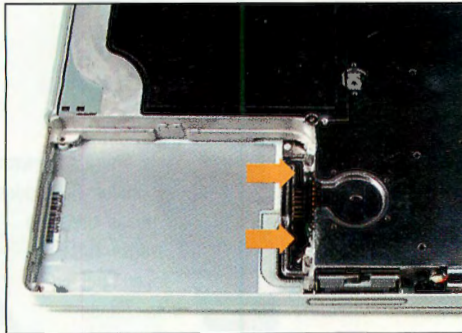




Use your fingernails instead of a tool to pry off your iBook's back, or you risk causing some serious cosmetic damage.

## 2 Pry Off the Backing

Removing the rear panel requires strong fingers and nerves of steel. You'll probably think the plastic is breaking—and it might, so be careful. Start at the battery bay and wedge your fingernails into the groove along the chassis, loosening the edge all the way around the iBook. Don't use a flathead screwdriver or putty knife as a crowbar—both are almost guaranteed to gouge either the polycarbonate edge or the soft magnesium frame you're prying it away from.



These screws lock down the palm rest, which covers the hard drive. Out they come!

## 3 Remove the Screws: Part Two

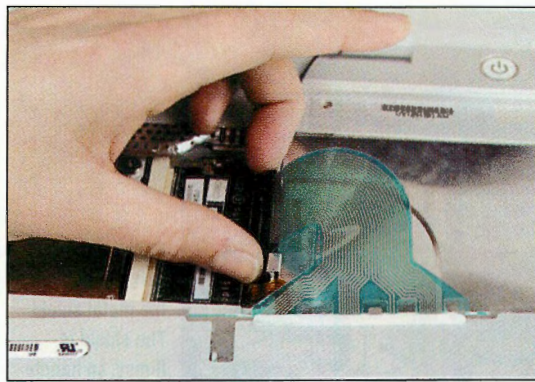
Remove the two screws in the battery bay, and then flip the iBook right side up on an antistatic surface such as a wood table or antistatic mat. Then strap on an antistatic wristband or discharge yourself by touching a metal object.



Your iBook has a little secret screw hidden under this magnet—use a small screwdriver to pop out the magnet.

## 4 Good-bye, Keys, Card, Riser, and More Screws

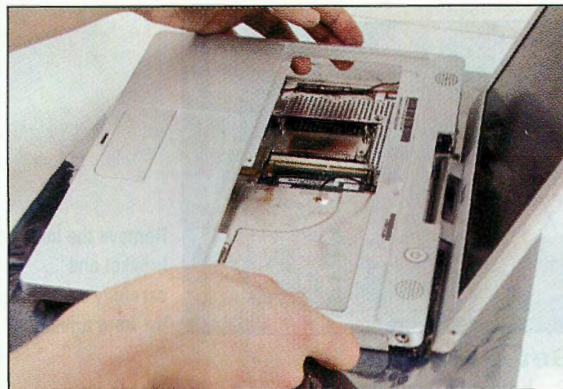
Remove the keyboard by sliding down the two keyboard-release tabs with your fingernails and pulling out the keyboard (use a tiny flathead screwdriver to twist the top-center screw if your keyboard is locked down). Next, remove the AirPort card (if applicable) and its riser (see step three of "Just the RAM, Ma'am," p63), and then remove the screws—don't forget to take out the hidden screw under the magnet (as shown above).



Use care when unplugging the keyboard and trackpad—don't rip 'em out by the wires.

## 5 Unplug the Keys and Trackpad

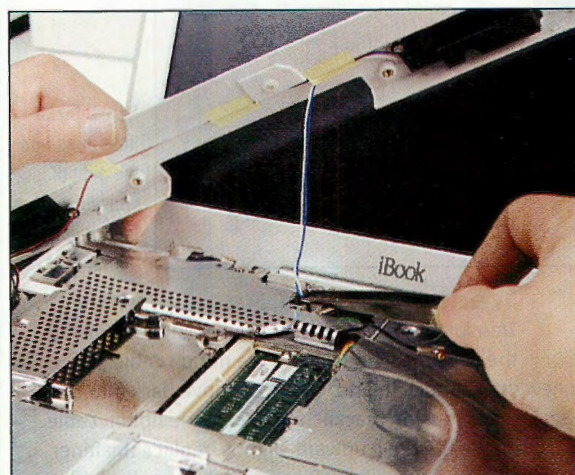
Detach the keyboard and trackpad by gripping their respective plugs and unplugging them from the iBook. Use needle-nosed pliers if you can't get a grip—whatever you do, don't pull on the attached cable. Pay close attention to the trackpad's plug, as it tends to come apart when unplugged—though that's easy to fix.



A little prying finesse will help steer the cover clear of the power port.

## 6 Take Your Top Off

Remove the console cover that surrounds the keyboard by jamming your fingernails into the grooved perimeter and loosening the top until you can pry it off. Remove the upper-right corner last—you have to lift the cover out and around the AC power port to remove it fully.

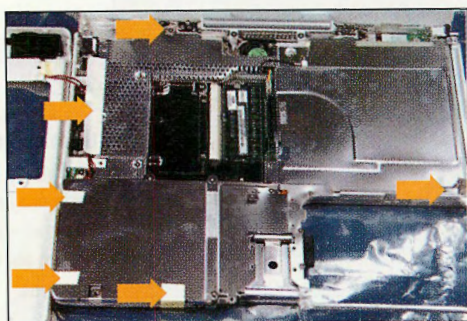


Unplug this short set of wires to move the cover away from your work area.

## 7 Set the Cover Free

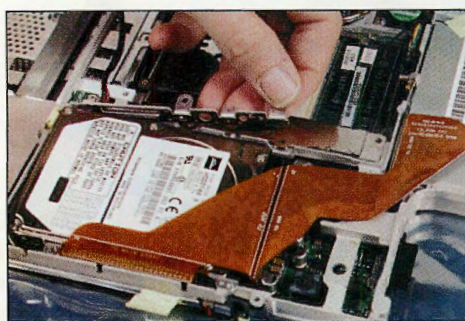
Well, almost. The cover is connected to the iBook by two sets of wires. Carefully remove the set plugged in near the bottom of the LCD screen using pliers or tweezers, and flip the cover to the left, out of your way. Leave the other set connected.





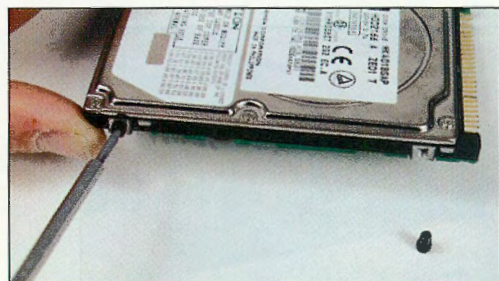
Remove these items to pull out the metal shield. The shield is flimsy, so handle it with care.

**8 The Return of the Dreaded Screws**  
To expose the hard drive, remove the entire metal shield. To do this, remove all of the screws on the plate, carefully peel back the tape strips on the lower-left corner, take out the magnet over the optical drive, and then carefully lift out the metal shield.



Remove the inner bracket and carefully angle out the hard drive.

**9 Set It Free**  
The hard drive is wedged between a ribbon cable on one end and two mounting brackets, one on each side. Remove the inner bracket, leaving the outer bracket and ribbon cable in place. With the one side free, hold the ribbon cable's plug in place and carefully angle out the drive. Whew! Then unplug the ribbon cable from the drive.



Screw these little pegs into the side of your new drive before you install it.

**10 Transplant and Reassemble**  
Transplant the little screws from your old drive into the new one. Then line up the ribbon cable's plug with your new drive, attach it, and wedge the drive back into position against the outside bracket. Make sure the ribbon cable is secure, then angle the drive upward slightly, replace the inner bracket, and slide the bracket back into position. If you've had enough of this hardware hackery, reassemble the patient and boot 'er up; otherwise, proceed to the next tutorial. Remember, you can't boot from a brand-new hard drive—boot from the Software Install CD (hold down the C key on startup) that came with your iBook and initialize the drive with the CD's Drive Setup.

## Insane Upgrade: Overclock Your iBook



### WHAT YOU NEED

- Soldering iron
- Small Phillips screwdriver
- Small flathead screwdriver
- High-level soldering skill and motherboard knowledge

### WARNING

The information contained in this tutorial is intended for infotainment only and merely illustrates how we overclocked our 500MHz iBook. We are in no way suggesting that you try this at home. In fact, do not attempt this hack unless you are highly skilled at soldering motherboards. We intentionally left out the soldering specifics, but those of you in the know will know what to do. We now return to our normal broadcast...



There's a reason why Fisher-Price doesn't make soldering irons—this tool doesn't belong in the hands of an amateur.

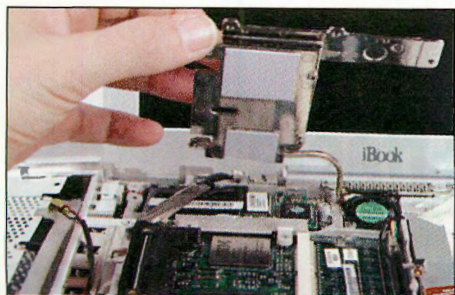
If you've gone through the last two upgrades and simply can't fight the (destructive) urge to go for broke and eke out that extra clock speed from your iBook, this is your last chance to bail. Any takers? Alrighty then, moving forward. Fire up the soldering iron, cross your fingers, and kiss all Apple support (and possibly your iBook) goodbye.

The iBook's system bus is widely regarded as its weak link. At 66MHz, it limits the flow of data between the processor and other motherboard components (such as RAM and video RAM). But since the iBook already uses PC100 RAM (emphasis on the 100), which rates as *compatible* with a 100MHz system bus, you can increase your processor's bus speed to match that rate.

To overclock a processor chip, you need to move some electrical resistors to reconfigure three PLLs (phase-locked loops), which tell the processor and other components how fast to run. One PLL increases the system bus from 66MHz to 100MHz, and the other two determine the processor's speed during regular and low-power operation (for first-rev Snow iBooks, the default is 500MHz and 400MHz—regular operating processor speed and low-power operating speed). We reset ours to 600MHz and 350MHz for faster speeds during normal operation. (See "Resistance Is Futile," p67, for the full range of theoretically possible combinations.)

This hack requires soldering on both the front and back of the motherboard. If your iBook isn't already dismantled from our prior hard-drive upgrade, follow steps 1 through 8 of "Hop Up the Hard Drive," p64, and then proceed as follows.

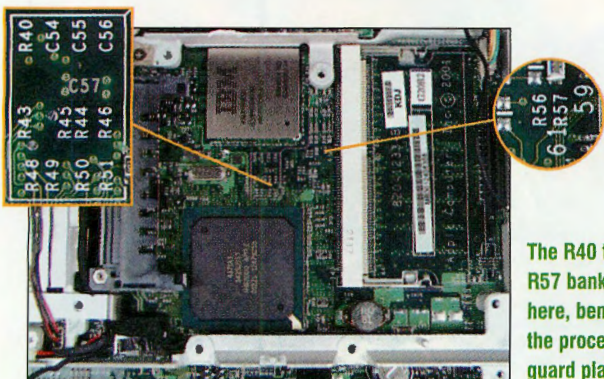




Carefully bend up the processor guard plate to view the motherboard.

## 1 Expose the Processor

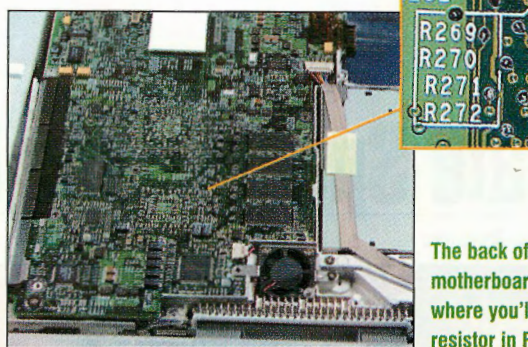
Remove the screws on the processor guard plate and then carefully bend it up to reveal the R40 through R57 bank on the motherboard. The fat wire attached to the plate plays a key role in cooling the processor, so take care not to damage it.



The R40 to R57 bank is here, beneath the processor guard plate.

## 2 Solder the Resistors

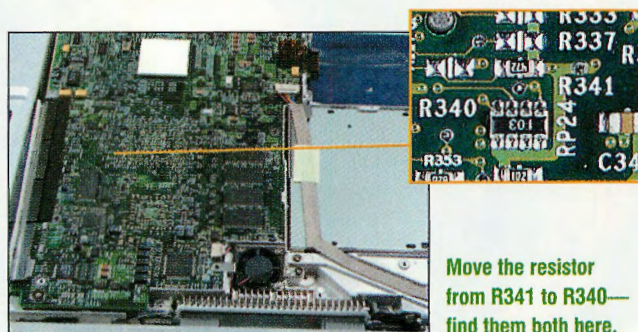
To get our target 600MHz and 350MHz configuration, we need to move the resistors from positions R43 and R44 on the motherboard to positions R45 and R57, respectively (see our handy PLL-multiplier chart below for alternative speed-boosting configurations). Steady with that soldering iron...



The back of the motherboard. Here's where you'll find the resistor in R271.

## 3 Move a Resistor

Flip the iBook over, remove all the screws from the back plate, and then remove the metal plate. Locate the R269 to R272 block on the motherboard. Then remove the resistor from position R271 and put it in a safe place (heaven forbid you should need it to undo this whole operation).





# Create Spectacular Movie Effects

by Andrew Tokuda



Find the Commotion Pro 4 demo, AlamDV 1.0, the MacAddict Special Effects Tutorial, and the Kicks Neck video on the Disc.



Catapult your home movies to the next level by adding eye-popping special effects.

## In This Section

### p69 Ready, Aim, Fire!

Special effects aren't always about 50-foot monsters and massive explosions. Some are manufactured to simulate real-life occurrences not originally caught on film or video, such as heavy mist or smoke coming from a chimney. The goal is to avoid making the effect look like an effect. We show you how to create gunfire so a toy gun appears real.

### p71 The Virtual Dungeon

We may live in the real world, but that doesn't mean we have to make our movies in it, too. Computer-generated worlds can come to life with a little bit of imagination and good technique. We show you how to add surrealism to your movies using a real person, a Mac-manufactured environment, and industry-standard greenscreen techniques.

### p74 Off with Her Head!

*Sleepy Hollow*'s Headless Horseman was a spectacular feat of special-effects wizardry. Now you can learn how to create your own macabre effect. We show you how to behead an actor virtually and give the head a life of its own.

**G**ive the average PC user a DV camcorder, and you'll get a nice family home movie. Give a multimedia-crazed Mac addict a DV camera, and you might wind up with a Hollywood-style mini-epic, like the *MacAddict* staff video we premiered on the Disc in our February 2002 issue.

Making movies doesn't have to stop when you finish putting together your footage. You can take your movie-editing knowledge to a higher level of authority by adding special effects. If you have a Mac, a DV camera, and some extra cash to invest in software, you can turn your simple "digital hub" into a professional video-effects workstation and crank out some serious, Oscar-worthy special effects for your videos.

Here's the scoop on how we used Pinnacle Systems' Commotion Pro (\$995, [www.commotionpro.com](http://www.commotionpro.com)) and AlamDV (\$60, but free for you lucky *MacAddict* readers—see the software on this month's Disc for details; [www.alamdv.com](http://www.alamdv.com)) to create three unbelievable scenes in last month's staff video, *Kicks Neck*. We show you how to create realistic gunfire, composite video clips using greenscreen techniques, and behead a *MacAddict* editor (it's movie magic, guys—we're not that cruel!). Check out our *Kicks Neck* video (on the Disc), grab the software and tutorial files, and get ready to impress both your friends and yourself.



# Ready, Aim, Fire!



## WHAT YOU NEED

- Commotion Pro 4.0 (demo on the Disc)
- AlamDV 1.0 (full version on the Disc)
- Tomb Raider files (inside the MacAddict Special Effects Tutorial folder on the Disc)



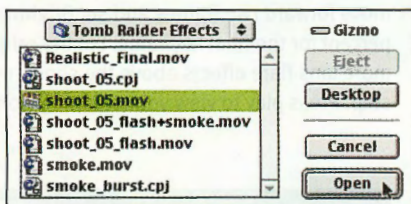
Create realistic gunfire coming from an orange-tipped toy pistol.

In the Tomb Raider segment of our *Kicks Neck* video, MacAddict art director Chris Imlay and production coordinator Hans Hunt fire their guns in one scene. Obviously we couldn't use real guns. No problem! We created our own gunfire.

Many amateur effects artists take a basic approach and simply create a muzzle flash (a quick burst of light) at the end of a gun barrel each time an actor recoils—that is, at the exact point when an actor jerks his arm back to simulate a gun's kickback. To create more-realistic gunfire, we added three effects: a muzzle flash, smoke, and lens flare. Here's how we did it.

## 1 Import the Video into AlamDV

Launch AlamDV. In the resulting dialog box, click New Project. In the Media Import dialog box, click Standard Import, navigate to the shoot\_05.mov file, and click Open. In this clip, two villains are pointing their pistols at the camera. Use the frame slider at the top of the window to scroll the video forward until you come to the first recoil position that Chris (the villain on the left) makes. Back up two frames.



To import a video clip into AlamDV, navigate to the clip you want to edit, and then click Open.

## 2 Add a Muzzle Flash

In the Special Effects palette, click the muzzle tool (the firing gun) and select Array Flashes from the pop-up menu. In the Effect Options palette under Type, click Front #1. Click four points around the tip of Chris's gun and press the Return key to generate the muzzle flash. Finish this sequence by moving the slider to the next recoil (made by Hans) and clicking four points around his gun tip to create another muzzle flash. Do the same with the last recoil position (Chris), except this time under Effect Options, Type, select Side #1. Save the movie as shoot\_05\_flash.mov.

Click around the gun barrel, press Return, and voilà— instant muzzle flash.



## 3 Create Smoke

Gun smoke should explode from a point and then dissipate into the air; Commotion's Fractal Brimstone effect does the trick. However, it contains a long list of complex parameter settings (worthy of an entire how-to in itself). For brevity's sake, we created the smoke for you—open smoke\_burst.cpj in Commotion Pro. In the Timeline, click the Smoke layer's disclosure triangle to reveal its parameters. Click the Effects disclosure triangle and then the Fractal Brimstone triangle to view the parameters list. Play with these settings to get an idea of what each one does. If you're running a full version of Commotion Pro, feel free to tweak the parameters to your liking and then save the file. Otherwise, move on to the next step.

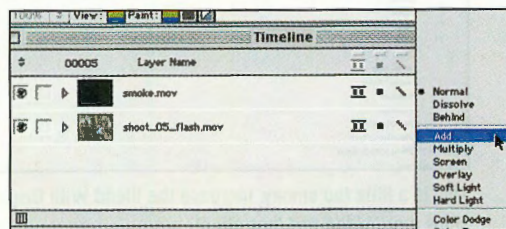
Creating smoke in Commotion is an intimidating venture. Luckily, you can just grab our smoke file and tweak to your heart's content.



## 4 Composite a Smoke Layer

In Commotion, under the File menu, select New and then New Project. Drag the tutorial files shoot\_05\_flash.mov and smoke.mov into the Project window. Click shoot\_05\_flash.mov and select Make Composite from the Composite menu, which allows you to layer frames. In the Composite window, move the playhead forward to two frames before the first muzzle flash appears (press the X key to move forward one frame and the Z key to move back). Drag smoke.mov from the Project window to the top layer of the Timeline. Though the screen turns black, the smoke effect is now set to start playing two frames before the muzzle flash. Turn the blackness transparent by clicking the smoke.mov layer's drop-down menu in the Timeline to bring down the menu, and then changing the layer type from Normal to Add. Press the X key until you see smoke start to form in the center of the screen.

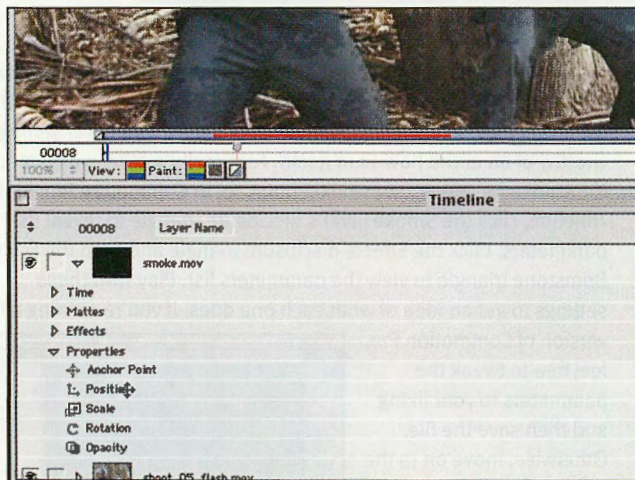
Change the smoke's layer type from Normal to Add to make the black background transparent.





## 5 Reshape and Reposition the Effect

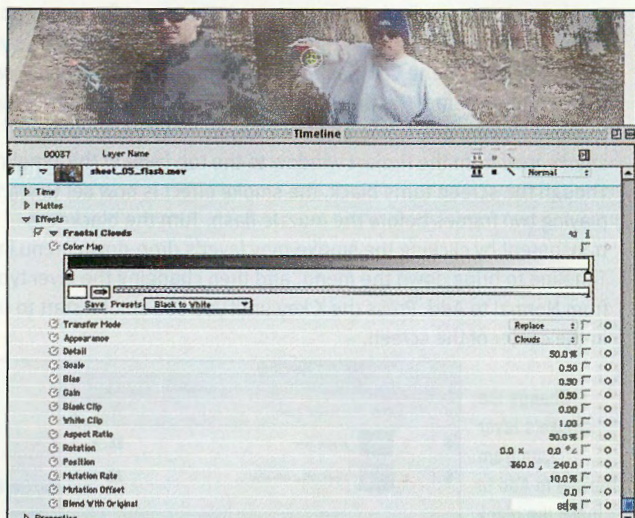
Click the smoke.mov layer's disclosure triangle to open the parameters. Click the Properties disclosure triangle, hold down the Option key, and then click and drag on the word *Position* in the Timeline to move the smoke on top of the muzzle flash in the composite window. Option-click-drag on the word *Scale* in the same manner and downsize the effect. Press the X and Z keys to check your work frame by frame. Follow the same steps for the other two shots, moving the playhead forward to two frames before each muzzle flash, dragging another copy of smoke.mov to the top of the Timeline, making the layer transparent, and repositioning and resizing. Press the play button to view your work.



Hold down the Option key, and then click and drag on the word *Position* in the Timeline to move the smoke effect on top of the muzzle flash.

## 6 Add a Smoke Cloud

Since the gunmen fire several times, we want the air to fill with smoke for added reality. In the Timeline, select the shoot\_05 layer. Under the Effects menu, select Particles, and then Fractal Clouds. Leave all the effects' parameters at their default settings, except Blend With Original—set this to 88 percent. Press play to view the effect.



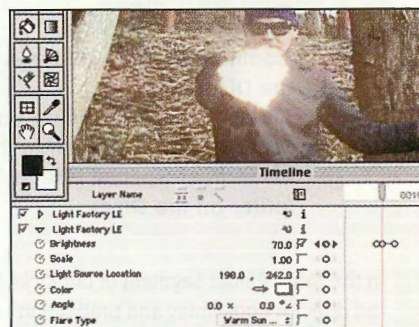
This is a little *too* smoky. Increase the Blend With Original percentage to show more video and less effect.

## 7 Create Lens Flare

For the final touch, add lens flare to replicate the reaction of a camera lens to bright light. Select the shoot\_05 layer. Under the Effects menu, select Knoll Light Factory and then Light Factory LE.

In the Composite window, drag the green crosshair on top of the first muzzle flash, and the lens flare will follow the target. Because this effect is present throughout the duration of the clip, change its parameters by

keyframing, or assigning values to parameters at specific times. Move the playhead back to the frame preceding the first muzzle flash. In the Timeline window, click the small white circle in Light Factory LE's Brightness parameter to set a keyframe at this point in the Timeline. Change the Brightness value to 0 (zero) percent to turn off the lens flare. Press the X key to move the video one frame forward (where the muzzle flash appears), and then set Brightness to 70 percent to create another keyframe. Then move forward two frames and set Brightness back to 0 (zero) percent for the final keyframe. For the other two gunshots, add two more lens-flare effects above the shoot\_05 layer and repeat this step. Press play to view your stunning work.



So the lens flare will occur only during the muzzle flashes, set keyframes for the effect.

## Color Blind

Those of you who watch *Late Night with Conan O'Brien* have probably seen his desk-driving segment, in which Conan pretends to drive his desk through various



A \$90 backdrop, some PVC tubes, and shop lights made up our greenscreen set.

city streets and other locales. In reality, a camera operator shoots Conan and his stationary desk against a bluescreen. A computer converts the screen's blue color into a transparency and then superimposes Conan and his desk over footage of a city street disappearing into the background. This technique is known as *chroma keying*.

Chroma keying turns a single-color backdrop transparent, effectively allowing you to use the foreground element as a layer for compositing over a separate image or video background. Blue and green are the color standards for chroma-keying work. Photoflex makes a 5-by-7-foot collapsible screen (\$90, [www.photoflex.com](http://www.photoflex.com)), in green or blue, exclusively for chroma keying. You must light the background evenly to get a clean separation (known as *cutting a matte*) between the foreground (subject) and background (bluescreen or greenscreen).



# The Virtual Dungeon



## WHAT YOU NEED

- Commotion Pro 4.0 (demo on the Disc)
- Alice files (inside the MacAddict Special Effects Tutorial folder on the Disc)

Chroma keying lets you blur the line between real and virtual worlds.

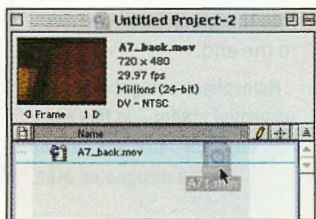
In our Alice segment, *MacAddict* managing editor Jenifer Morgan walks through a dark, eerie dungeon toward a flaming, suspended knife and reaches for it. We composited this scene (that is, we assembled two or more individual shots into one) using video footage, a computer-generated background, a computer-generated knife, and a fiery effect.

We shot Jenifer in front of a *greenscreen*, essentially a green background that you can make transparent using Commotion or another comparable video-editing program. Shooting against a greenscreen allows you to mask out a subject easily for placement over another image or movie. This process is called *chroma keying* (see "Color Blind," p70, for more information).

We created our pillar of fire in Commotion Pro's particle system, using the Fractal Fire preset; we included our fire project on this month's Disc (fire2.cpi) for your experimentation. We modeled and rendered the spinning knife in NewTek's LightWave (\$2,495, [www.lightwave3d.com](http://www.lightwave3d.com)); you'll find this in the Tutorial folder as well. Here's how to pull this scene together:

## 1 Load the Clips

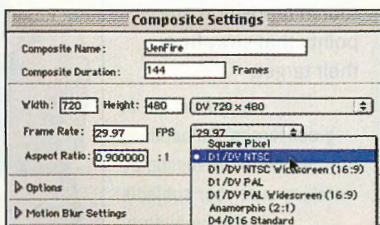
To create the scene, you need to layer the greenscreen footage of Jen over our computer-animated dungeon background. Before you do this, however, chroma-key your footage by telling your Mac which areas of the foreground layer (footage of Jen) should be visible and which parts should be transparent to allow the background (the dungeon) to show through. In Commotion, load A71.mov (Jen) and A7\_back.mov (dungeon) by dragging them into the Project Window. Click A71.mov in the Project Window and select Make Composite from the Composite menu. Under the Composite menu, select Composite Settings.



To load clips into Commotion Pro, just drag your video footage into the program's Project window.

## 2 Configure the Composite

In the dialog box, type *JenFire* for Composite Name and set Composite Duration to 144 frames. In the drop-down menu to the right of Width and Height, select DV 720 X 480. In the Frame Rate drop-down menu, select 29.97 frames per second. In the Aspect Ratio drop-down menu, select D1/DV NTSC. Click OK.

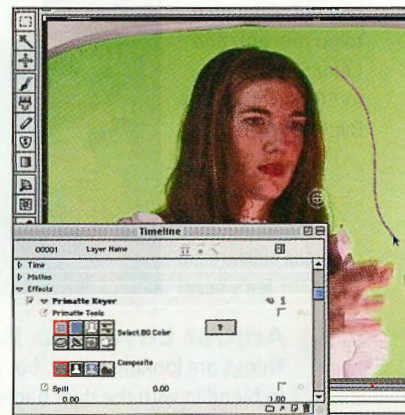


Change the video composite's parameters via the Composite Settings dialog box.



## 3 Sample a Color for Chroma Keying

Drag A7\_back.mov from the Project window to the Timeline window below A71.mov. To make the greenscreen transparent in the A71.mov layer, select the layer in the Timeline window and, under the Effects menu, select Keying and then Primatte Keyer. The plug-in will appear in the Effects subsection on the A71.mov layer in the Timeline. Click the Select BG Color button (top row, left) under the Primatte Tools parameter, select the arrow tool in the tool palette, and create a short line by dragging in the greenscreen area in the Composite window to sample the color. Commotion chroma-keys the green out of the video, revealing the dungeon layer beneath it.



Dragging a line across the green area will sample the color and tell Commotion to make this particular shade of green transparent.

## 4 Enlist a Cleanup Tool

Because of the color variances on the greenscreen caused by subject shadows and lighting hot spots, you might not be able to make all of the greenscreen transparent. To clean up the matte, in the Timeline under the Primatte Tools parameter, click the Clean BG Noise button (top row, second from left), and then click the Matte button (bottom row, second from left) to view the matte (black areas are transparent, white areas are opaque).

If you have uneven lighting (like the hot spot on the right) on your greenscreen, you may need to clean up the matte.





## 5 Clean Up the Matte

All of the greenscreen areas should be solid black, and Jen should be solid white. Wherever you see gray in the greenscreen background matte (the black area), draw a line across the gray to turn it black by dragging the arrow tool across it. Repeat with all gray areas in the black areas. Do the same for any gray areas in the foreground matte (the areas you want to be white) by clicking the Clean FG Noise button (to the right of Clean BG Noise) and applying the same method.

To create a seamless composite, get rid of the gray areas in your matte until you see nothing but black and white.



## 6 Wipe Up Any Spills

To get rid of the green halo, known as a *spill*, around Jen's head, click the Composite button under the Primatte Tools parameter (bottom row, left). Then click the A71.mov layer. Under the Effects menu, select Keying and then Spill Killer EZ. In the parameters, set Range to 23 percent, Tolerance to 30 percent, and Color Suppression to 88 percent. Bye-bye, halo.

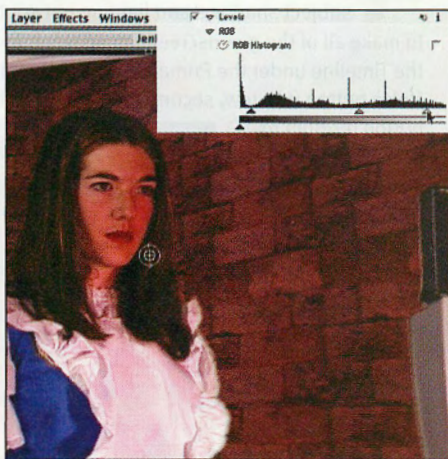
Spill Killer fixes green spills like a champ. No more green halo around Jen's head!



## 7 Adjust Levels to Blend

Things are looking better, but we need to adjust Jen's tone to blend in with the dark background. Under the Effects menu, select Image Control and then Levels. In the Timeline, click the RGB disclosure triangle to display the RGB Histogram. Drag the black slider (the left triangle under the graphic that looks like a mountain) and the white slider (right triangle) toward the center to add dark contrast. Then adjust the center slider until the foreground matches the background tone.

Use Levels to blend the foreground image into the background layer—here, we're darkening Jen's tone to match her surroundings.



## 8 Take Out the Garbage

Notice that arch behind Jen? It's actually the wall behind our greenscreen, which we couldn't key out because it isn't green. To get rid of it, create a *garbage matte*, a secondary matte that gets rid of anything outside a designated area. Double-click A71.mov in the Timeline, and then double-click the pen tool in the tool palette to open the Rotosplines palette.

This archway is actually the wall behind our greenscreen. Get rid of it by creating a garbage matte.



## 9 Set the Rotosplines in Action

Click the new Bézier spline button (the blue curve at the bottom of the Rotosplines palette), go to frame one in the video, and click around Jen within the greenscreen area to create Bézier curve points, leaving the arch outside the selection, as pictured below. Click your starting point to complete the spline. Press the X key to advance one frame and check to make sure all points remain in the green area. Use the move point tool (the white arrow) in the Rotosplines palette to move points inward if they stray beyond the green. Continue advancing the video frame by frame, moving any wayward curve points back into the green until you get to the end.

Rotosplines can get rid of any unwanted matter—in this case, our arch—that lies outside a designated area.



## 10 Fix Blunders with Rotosplines

Our greenscreen is small, causing Jen's shoulder, arm, and head to get keyed out of the areas it doesn't back. Fortunately, we can use Rotosplines to fix this as well. In the Rotosplines palette, click the new Bézier spline button, and then click tightly around the perimeter of Jen's right sleeve puff to create a spline. Create as many Bézier splines as you need to surround Jen's right shoulder, right arm, head, and anything else that's cut off in the composite. Press the X key to advance through the entire clip again and use the move tool to reposition any points that stray from their target.

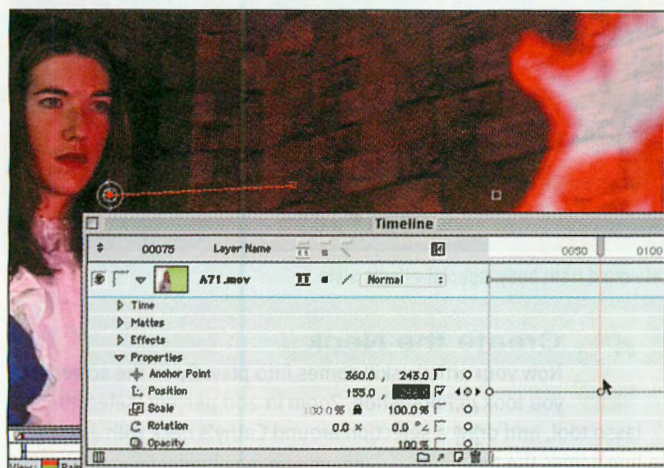
If you run out of greenscreen, Rotosplines come to the rescue by making sure your subjects stay in the picture.





## 11 Add Dramatic Motion

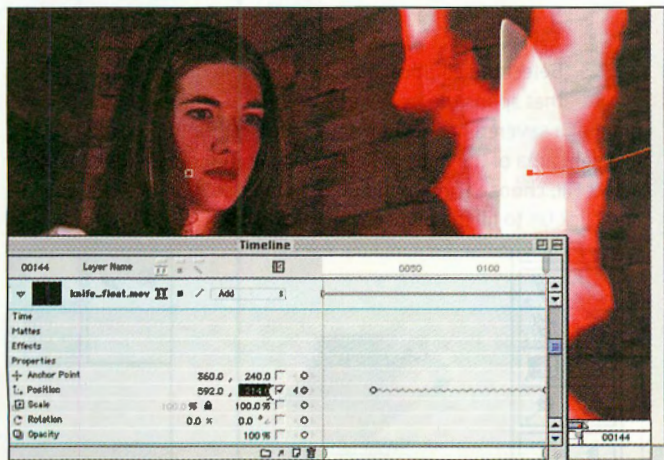
You should now have a clean video of Jen walking through the CG background. However, she moves a little erratically and doesn't follow the animation of the background. Fix this by keyframing her movement. Type the number 1 in the Timeline frame field (upper-left corner) to go to frame 1. In the A71.mov layer, click the Properties disclosure triangle. In the Position parameter, click the white circle to set a keyframe at frame 1, and type 155, 266 in the coordinate fields to move Jen's position. Go to frame 75, click the white circle to set another Position keyframe, and leave the coordinates as is. Then go to frame 144 and type in Position coordinates 326, 257 to create a final keyframe. Press play to see how your new motion flows.



Alter Jen's movement through the scene by keyframing specific position coordinates in the Timeline.

## 12 Add the Knife

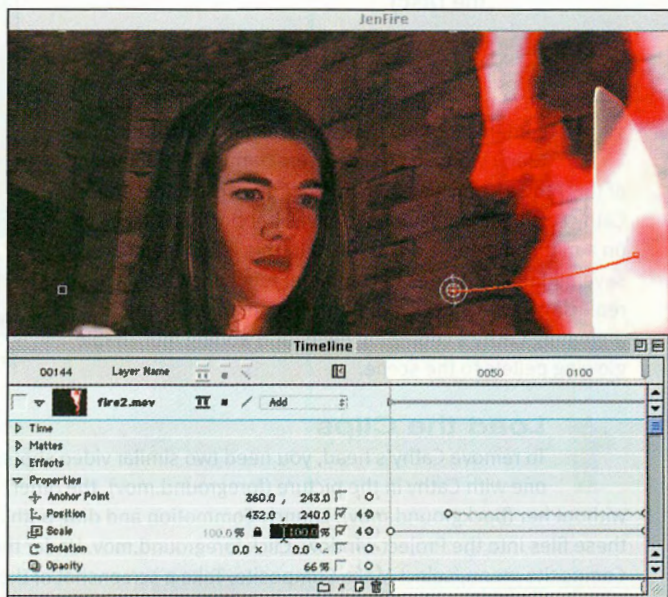
Drag knife\_float.mov and fire2.mov into the Project window. Then drag knife\_float.mov into the Timeline window above the A71.mov layer. Change its layer type from Normal to Add in the drop-down menu to make the knife semitransparent. To move the knife into the proper position, click the knife layer's disclosure triangle in the Timeline and then click the Properties disclosure triangle. In the Position parameter, set a keyframe at frame 33 and type in the Position coordinates 765, 169. Then go to frame 144 and type in the Position 592, 214 to set another keyframe.



Magically suspend our 3D-modeled knife by setting its position coordinates at specific keyframes.

## 13 Make Fire

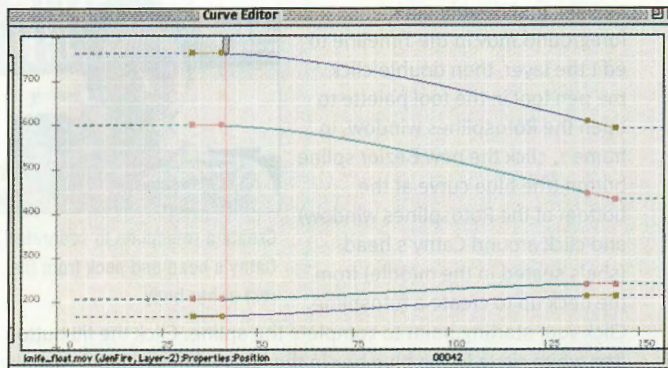
Drag fire2.mov into the Timeline above the A71.mov layer, open its Properties, set a keyframe at frame 33 on its Position parameter, and type in the coordinates 601.2, 207.9. Go to frame 144 and create another keyframe by typing in the Position coordinates 432, 240. To make the flames appear to grow and recede, set a keyframe on the Scale parameter at frame 33 and set Scale to 150 percent. Then go to frame 144, and bring Scale down to 100 percent to set a final keyframe.



Give real-life attributes to the fake fire using the Scale parameter—here we can make our flames grow and recede by setting keyframes in the Timeline and altering the fire's scale through the duration of the clip.

## 14 Adjust the Motion

We want the fire and knife motion to start slowly and then accelerate slightly. To adjust the motion, click the Expand/Contract View button (upper-right corner) in the Timeline. Hold down the Control key, click the fire layer's first Position keyframe in the Timeline's expanded view, and change the curve type from Linear to Spline in the contextual menu. Then Control-click the same keyframe point and select View In Curve Editor from the contextual menu. Repeat these two steps with the knife layer. In the Curve Editor, click the spline handles and drag them, adjusting the curves' shapes to match our image (below). Now press play and enjoy the show!



Use the Curve Editor to set the knife-and-fire effect into perfect motion.



## Off with Her Head



### WHAT YOU NEED

- Commotion Pro 4.0 (demo on the Disc)
- Photoshop (or comparable image editor)
- Ms. PacMan files (inside the MacAddict Special Effects Tutorial folder on the Disc)

**T**he Ms. PacMan segment in our *Kicks Neck* video contains footage that some may find disturbing (don't worry, no editors were harmed in the making of this movie—only egos). In it, *MacAddict* executive editor Cathy Lu's head miraculously leaves her body and takes off on a munching spree down the hall. This effect requires several different stages to complete: removing Cathy's head, replacing it with a neck stump (ew!), compositing and animating Cathy's chomping head, and adding munchable glowing pellets to the scene.

### 1 Load the Clips

To remove Cathy's head, you need two similar video shots: one with Cathy in the picture (foreground.mov), the other without her (background.mov). Launch Commotion and drag both of these files into the Project window. Click foreground.mov. Under the Composite menu, select Make Composite. Take a screenshot of the Composite window by pressing Command-Shift-3, and set this aside (you'll use this later to create Cathy's neck stump). Then drag background.mov below the foreground.mov layer in the Timeline.



Take a screenshot of this movie frame—you'll need it to reconstruct Cathy's neck.

### 2 Mask the Head

To remove Cathy's head, first double-click foreground.mov in the Timeline to edit the layer, then double-click the pen tool in the tool palette to open the Rotosplines window. In frame 1, click the new Bézier spline button (the blue curve at the bottom of the Rotosplines window) and click around Cathy's head (she's seated in the middle) from the neck up to create a roto spline. Click your starting point to complete the spline. Click the fill button (the white circle in the blue box in the Rotosplines palette) to make Cathy's head disappear. View the effect in the Composite window.



Create a roto spline to separate Cathy's head and neck from the rest of her body.



Separate mind from body, special-effects style.

### 3 Create the Neck

Now your artistic skill comes into play. Open the screenshot you took in Photoshop. Zoom in 200 percent, select the lasso tool, and draw a selection around Cathy's neck with a straight line across the top, including her chin area. Copy the selection (Command-C) and paste it into a new layer (Command-V). Turn off the background layer's visibility in the Layers palette by clicking the eye icon.



Draw a selection around Cathy's neck, making a straight line across the top.

### 4 Shape the Stump

Select the elliptical marquee tool and draw a narrow ellipse that spans the neck width at the top—this simulates the cut point of a severed head. Then select the eyedropper tool and click in a light area of the neck to select the color. Under the Edit menu, select Fill, choose Foreground Color in the Use drop-down menu, and click OK to fill the ellipse with the flesh tone.



Create a squatty ellipse over the neck to form the top of the neck stump.



## 5 Paint In the Guts

Now for the gruesome part. With the ellipse still selected, click the foreground color in the tool palette to open the Color Picker. Choose an icky color (or several) and use a small 1-pixel paintbrush to paint in blood and guts to your liking. Use the smear tool (the finger icon) to blend colors. When satisfied, select Inverse from the Select menu, select the eraser tool, and erase the neck area above the ellipse.



Make your stump as gruesome as you dare by painting it with different colors—the choice of palette is yours.

## 6 Place the Neck

Delete the background layer by dragging it to the trash icon in the Layers palette so you're left with just the neck. Because DV video pixels aren't square like the pixels displayed on your monitor, you need to flatten the neck before importing it into Commotion. To do this, select Image Size from the Image menu. In the dialog box that appears, set Width to 90 percent, keep Height at 100 percent, and click OK. Save the layer as neckstump.psd. Drag the file into Commotion's Project window and then into the Timeline window between background.mov and foreground.mov. Click the stump layer's disclosure triangle, and then the Properties disclosure triangle. Option-click-drag on top of the word Position to move the stump until it gruesomely appears where the neck should be. Horrors!



Congrats! Your headless effect is now fit for any horror movie.

## 7 Import the Chomping Head

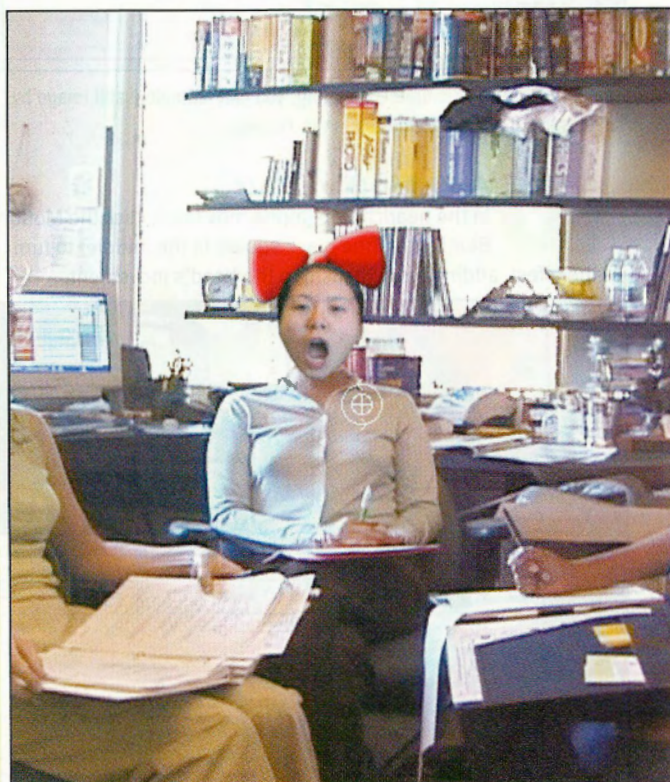
We shot Cathy's head in front of a greenscreen, set an Alpha (transparency) channel around her head, added the bow in Photoshop, rendered one sequence with Cathy's mouth open and one with it closed, and then looped the rendered sequence multiple times in QuickTime Pro to create headchomp\_alpha.mov. Start a new Project in Commotion, and drag headchomp\_alpha.mov and missing\_head.mov into the Project window. Click missing\_head.mov and select Make Composite from the Composite menu.



In our chomping-head footage, the alpha channel (the black area) will appear transparent in Commotion.

## 8 Sample a Color for Chroma Keying

Drag headchomp\_alpha.mov into the Timeline window above missing\_head.mov. Cathy's head will appear without the black background (thanks to the Alpha channel we set), but it's huge. Click the headchomp layer's disclosure triangle and then the Properties triangle. In the Scale parameter, click the small white circle to create a keyframe and type in 30 for the percentage. In the Position parameter, create a keyframe and type in the coordinates 331, 193 to place the head on the neck stump.

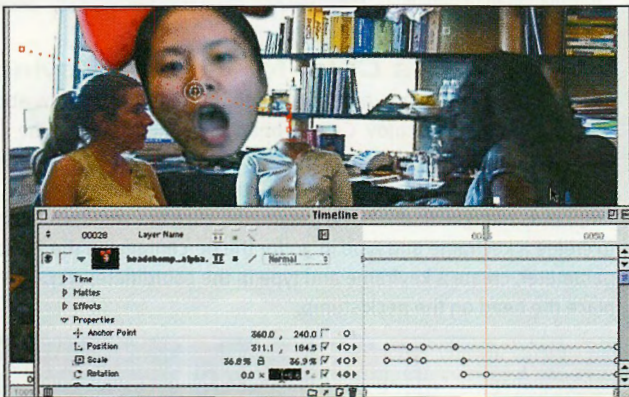


Cathy's new head is, for the moment, safely attached to her body...but not for long.



## 9 Animate the Head

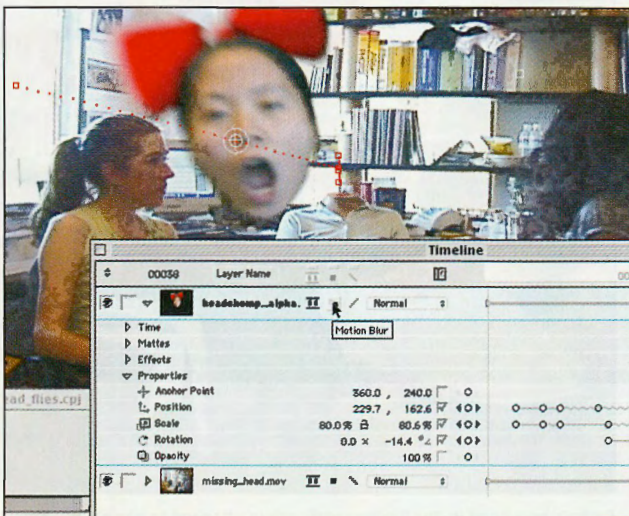
Put the chomping head into motion by selecting the headchomp layer. Under the Layer menu, select Time Stretch. In the dialog box that appears, select Percentage from the Units drop-down menu, type 50 for the percentage value, and click OK. Click the Expand/Contract View button (upper-right corner) to expand the Timeline. In the Timeline's frame field (upper-left corner), type 6 and press the Return key to advance the movie to frame 6. In the Position parameter, click the white circle to set a keyframe, and type in the Position coordinates 331, 193. Advance to frame 11, and type in the Position coordinates 331, 205 to set another keyframe. Continue in the same manner with the following Position coordinates in the stated frames—frame 14: 331, 178; frame 21: 331, 190; and frame 57: 15, 110. In the same manner, set keyframes for the following Scale percentage values—frame 6: 30, 30; frame 11: 32, 25; frame 14: 30, 32; frame 23: 30, 30; and frame 57: 175, 175. Finally, set keyframes with the following values for Rotation—frame 23: 0, 0; frame 28: 0, -6.6; and frame 57: 0, -16.5. Press play to see the animated head—phew!



Though the process is time consuming, you can animate a still image by keyframing specific parameters in the Timeline.

## 10 Add Motion Blur

In the headchomp\_alpha.mov layer, click the Motion Blur button (the black square in the middle) to turn on the effect, adding more realism to the head's movement.



Add motion blur to give the rapid movement some realism.

## 11 Add the Pellets

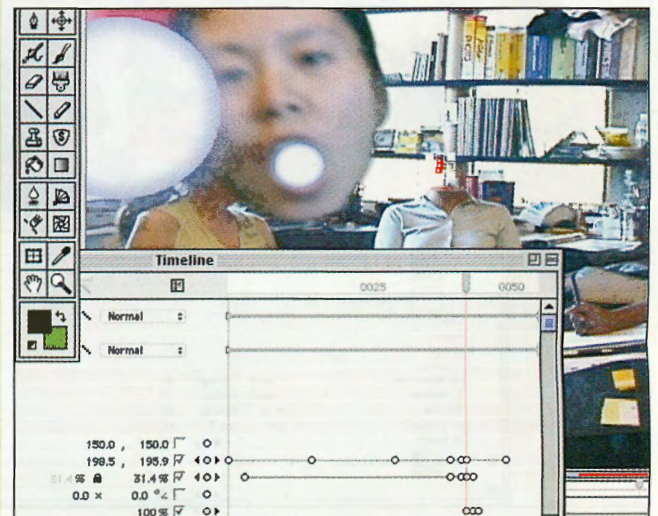
Start a new Commotion project and drag cathy's\_head\_flies.mov and brightball.psd into the Project window. Click cathy's\_head\_flies.mov and select Make Composite from the Composite menu. Using the knowledge you acquired in this tutorial, drag brightball.psd into the Timeline above cathy's\_head\_flies.mov, position it over Cathy's right eye, and scale it down to match our image (see below). Create three more pellets by selecting brightball.psd in the Timeline, then copying and pasting the image into the Timeline three times—the pellets will appear stacked on top of each other in the Composite window. To separate them, Option-click-drag on the word Position in each pellet layer, and move each pellet in turn so they form a single line, leading left and slightly up. To create the illusion of depth, Option-click-drag the Scale parameter of the left pellet and increase its size as shown at right. Repeat with the next two pellets, scaling them down progressively toward the right.



Copy and paste pellets, then reposition and resize them to form a depth-of-field effect.

## 12 Animate the Pellet Gobbles

As Cathy's head flies forward and her mouth opens, make the pellets shrink and disappear into her mouth as if she's eating them. Have her swallow the first pellet at frame 25. Go to frame 24 and in the first pellet layer (the one over Cathy's eye), add a keyframe to the Position, Scale, and Opacity parameters without changing values. Advance to frame 27 and set the Opacity to 0 (zero) percent, and the Scale to 0 (zero) percent. Then go back to frame 25 and set the pellet's Position so it covers Cathy's mouth. Go to frame 26 and move the pellet over the mouth again. Drag the playhead forward through the Timeline, setting similar values for the other pellets. The Ms. Pac Man sequence is now complete!



Change the pellets' parameters to create the illusion of Cathy eating them.



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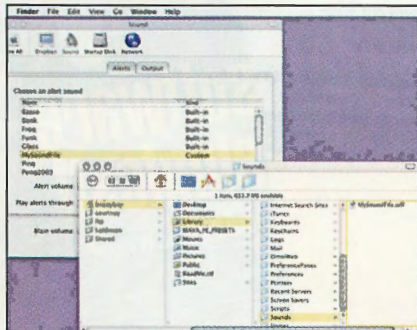
Submit technical questions or helpful tips directly via email ([askus@macaddict.com](mailto:askus@macaddict.com)) or c/o **MacAddict**, 150 North Hill Dr., Brisbane, CA 94005.

### Q How on earth do you add extra alert sounds to Mac OS X?

**A** Adding sounds to your alert sounds library is just as easy in Mac OS X as it is in Mac OS 9.x and earlier. With OS 9.x and earlier OSs, you simply drag any sound in the System 7 file format onto your System Folder, and your Mac stores the sounds in the proper place.

In Mac OS X, two things have changed: the file type the OS uses for alerts and the location where these sounds are stored. OS X uses AIFF (Audio Interchange File Format). You can easily convert different audio formats (like MP3, WAV, and System 7) to AIFF, using QuickTime Pro (\$29.99, [www.apple.com](http://www.apple.com)) or SoundApp (free, [www-cs-students.stanford.edu/~franke/SoundApp](http://www-cs-students.stanford.edu/~franke/SoundApp)). OS X stores built-in system sounds in a read-only folder. Luckily, each user can set up a unique set of sounds in addition to what's already built in.

Once you have your AIFF files ready to go, click on your user name, select the Library folder, and then place the files in the Sounds folder. You can access your sounds via the System Preferences. Keep in mind that each user's sounds are stored in a different location, so your sounds won't be available to other users who share your Mac unless they can access your user account.



**Eep! Forget about those tired built-in alerts—add your own alert sounds in X and panic accordingly.**



**Add new sounds to Mac OS X's alert sounds library, where the wild eeps are.**

### Q Can I share my iTunes library between Mac OS 9 and OS X?

**A** Yes, you can, but you need to do a little setup first. In Mac OS 9.x, iTunes stores its playlists and library in the iTunes folder, which is in the Documents folder. All of your imported CD audio files are also in the iTunes folder, but they're stored in the iTunes Music folder. To share your OS 9.x iTunes info with OS X, make an alias of your OS 9 iTunes folder and put it in your Documents folder in OS X. Don't rename the iTunes alias, or you'll break its link. You should now have the same playlists and songs available in both 9 and X.

### Q How can I make my digital movies look more like film?

**A** DV (digital video) looks wondrously pure onscreen, but it lacks the warmth and film grain we're used to seeing in film. DV colors can be less saturated than colors in film, and skin tones in DV often look ashy. DV also captures precise movement in a scene without the usual motion-blur trails, making fast motion look strangely disjointed. Though you can fake the look of film using software-filter plugins, such as DigiEffects' CineLook (\$695, [www.digieffects.com](http://www.digieffects.com)), you can also try a handy technique we use in Final Cut Pro (\$999, [www.apple.com](http://www.apple.com)) to give our video a more filmlike look. Duplicate a clip and place it above the original in the timeline, so the original is on V1 (video track 1) and

the duplicate is on V2. Delete the audio track of the V2 clip. Use the De-interlace filter on each clip—set one to de-interlace the odd fields, and set the other to de-interlace the even fields.

Next, under the Motion tab, set the V2 clip's opacity to 50 percent, and render the video. The effect may appear subtle onscreen, but it's more dramatic on a big screen, after you've rendered the video back to your DV camera.



**You can make digital video look like film if you use our technique.**

### Q What is a gibibyte?

**A** The answer to this riddle lies in the more generally asked, "What is a gigabyte?" Anyone who has purchased a hard drive knows that what you see isn't necessarily what you get. For example, an



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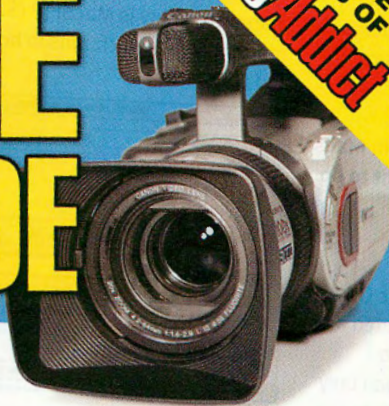
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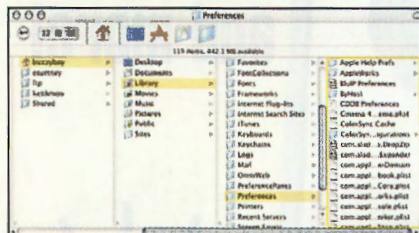
advertised 20GB drive may display only 19GB when in use. Which spec is correct? This is where the gibibyte factors in.

Historically, a gigabyte has been considered to be 1,000,000,000 (1 billion) bytes. But measured precisely, it actually contains 1,073,741,824 bytes. In December 1998, the International Electrotechnical Commission approved the use of the term *gibibyte* to deal with this size discrepancy, specifying that a gigabyte would refer to the round number (1 billion) and a gibibyte would refer to the precise byte measurement. Confused? This naming convention hasn't quite taken off yet, but for more information check out the National Institute of Standards and Technology Web site at <http://physics.nist.gov/cuu/Units/binary.html>.

**Q** I often delete preferences files in Mac OS 9.x to fix applications. I want to do this in Mac OS X, but I can't find the preferences files. Where are they?

**A** Preferences files are tricky in Mac OS X because they are seemingly located all over the place. However, if you need to troubleshoot a problem application, you only need to concern yourself with the preferences in three locations.

You'll find the most useful preferences files in your Users directory (located at Users/username/Library/Preferences); it contains all of the application and system preferences you've set. You can trash any of the com.apple.something.plist files in this folder if you suspect they're wreaking havoc on your Mac. The preferences located in the Library/Preferences folder belong to low system-level processes like the log-in window and the Finder. Also look in the Users/username/Library/Preferences/ByHost folder for useful System Preferences.



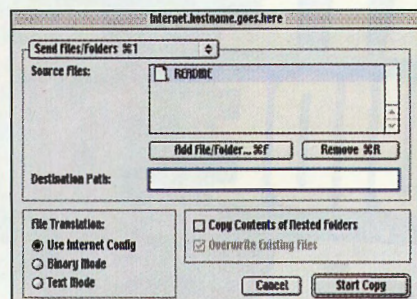
The X files mystery is solved—here are the preferences files!

**Q** How do I upload files from my Mac via SCP?

**A** Along comes a new protocol of the month, and where's the Mac client? SCP (secure copy protocol) and SFTP (secure

file transfer protocol) are the latest trends in software encryption for server administrators. These networking protocols use the SSH (secure shell) transport to protect data while files are in transit.

If you're running Mac OS X, you have the tools you need. Unfortunately, they're command-line tools (no GUI yet). To upload files, type SCP or SFTP in the Terminal to start transferring files—just make sure you know the exact paths for everything. If you're using Mac OS 9.x, you have a couple of graphical tool choices. For SCP, check out NiftyTelnet SSH (free, [www.lysator.liu.se/~jonasw/freeware/niftyssh](http://www.lysator.liu.se/~jonasw/freeware/niftyssh)). Another nice shareware utility is MacSFTP (\$25, [www.macssh.com](http://www.macssh.com)), which runs in both OS 9 and OS X.



How Nifty is this? SCP from your Mac!

**Q** I'm running Mac OS X on my new Quicksilver G4 with a non-Apple keyboard, but I can't open the CD drawer without having to restart my Mac while holding down the mouse button every time. Apple's Eject app won't work. Help!

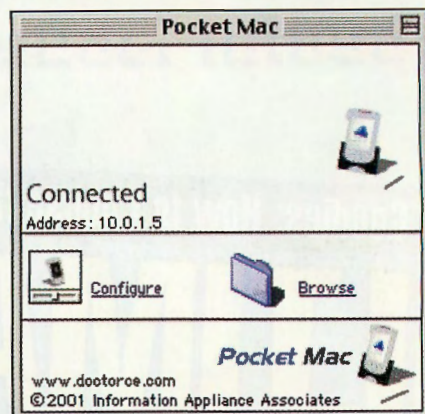
**A** We tackled this issue for users running Mac OS 9.x a couple of months ago (*Ask Us*, 1/02, p76), and no, the Eject utility doesn't work in OS X. Apple solved this problem by setting the F12 key to perform the same function as the Eject key on an Apple keyboard. Now any keyboard with an F12 key can eject the CD tray.

**Q** Is it possible to sync my iPAQ Pocket PC with my Mac?

**A** Some of you may shudder at the sight of Microsoft's name on the Pocket PC, but the iPAQ is a spiffy little device with lots of cool capabilities (like the ability to play MP3s).

As is true for any PDA, however, the secret to the iPAQ's success is that it syncs information to your desktop. For many months the Mac and iPAQ couldn't speak the same language (unless you successfully applied a difficult Virtual PC—Compact Flash

technique). Thankfully, the fine folks at PocketMac ([www.pocketmac.net](http://www.pocketmac.net)) developed PocketMac, an app that allows your Pocket PC to sync with a Mac whether you're using OS 9.x or OS X. You can even browse Pocket PCs on a TCP/IP network. Great work, guys!



iPAQ, meet iMac. iMac, meet iPAQ.

**Q** My poor iBook has experienced some serious abuse. Is there a way I can get rid of all the scratches?

**A** Apple really knows how to make laptops and MP3 players look good. The problem? These devices' surfaces are so flawless that when they do get a scratch (and they eventually will), it really stands out. While replacing the casing would be impossible and expensive, you might be able to hide some flaws using an auto product.

Many auto-supply stores carry plastic-safe polishing products you can use to conceal minor scratches on your iBook or other devices. Just be sure to read the fine print and test it on a small area of your iBook before you go to town on the entire surface.



Some polishing products may help conceal minor iBook scratches, but for major damage, why not simply embrace your iBook's flaws?

Buz Zoller is not only a Mac expert, he's also a proud father—happy birthday, sweetie, Daddy loves you!



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PowerON Computer Services	(800) 673-6227	89
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# MacAddict

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in the May 2002 issue of *MacAddict*

**Ad Space close** .....Feb. 19

**Materials due** .....Feb. 26

**On-sale date** .....April 9

## Did you know?

- **32%** of Mac Addict readers own digital video cameras.
- **31%** plan to purchase digital video cameras in the next 6 months.
- **69%** own digital cameras.
- **32%** plan to purchase digital still cameras in the next 6 months.
- **95%** of Mac Addict readers make purchase recommendations to others - making Mac Addict the best place to reach buyers and those who look to Mac Addict readers for advice. (Reader survey, march 2001)

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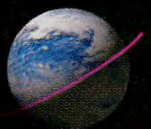
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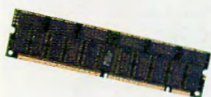


## Legacy Mac memory

Call or visit website for latest RAM prices 1-800-275-4576

168PIN Mac 5V DIMMs FPM 60ns

168PIN 3.3v Mac DIMMs EDO 60ns



	Non EDO	EDO
16MB ...	\$7.50	\$9.99
32MB ...	\$17.95	\$17.99
64MB ...	\$24.99	\$28.95
128MB ...	\$34.95	\$39.95

Mac 5V DIMMs required for 54/55/6360/65/72/73/75/85/86/95/9600s, PowerComputing iPowerWave/PowerTower/PowerCenter, SuperMac J700/S900/C500/C600. \*\*PowerMac 7200 is not compatible with EDO DIMMs. \*PowerMac 5500/6500/C500/C600 Require EDO DIMMs. \*128MB DIMMs are not compatible with 54/55/6360/64/6500/C500/C600 Model machines.

Mac 3.3V EDO DIMMs are required for PowerMac 4400, PowerMac 7220/200 (International version of 4400), Motorola StarMax 3000/4000, Motorola based clones.

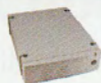
72PIN 32bit 60ns 2k Refresh SIMMs For most older i40, PPC Pre-PCI Models



16MB ...	\$8.95
32MB ...	\$12.95
64MB ...	\$26.95*

\*For PowerPC 61XX/71XX/81XX, 9150 models only!

## Storage HOT buys!



### 3.5" SCSI Drives

4.5GB Quantum Viking Int	\$49.95	Ext \$119.95
8.5ms, 7200RPM, 512k cache, 50pin SCSI, 1yr warranty		
18.2GB IBM UltraStar 18ES Int	\$129.95	Ext \$199.95
7ms, 7200rpm, 2048k cache, SCSI, 1yr warranty		
36.4GB Quantum Atlas 10k Int	\$169.95	Ext \$239.95
5ms, 1000RPM, 4096k cache, 5yr warranty		

### 3.5" ATA / IDE Drives

INTERNALS ONLY

120GB Maxtor DiamondMax	\$249.95
5400RPM, 2mb cache, ATA/133, 3yr warranty	
100GB Western Digital Caviar	\$239.95
7200rpm, 2mb cache, ATA/100, 3yr warranty	
60GB IBM DeskStar 60GXP	\$139.95
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40GB Seagate Barracuda IV	\$119.95
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20GB Western Digital Caviar	\$79.95
7200RPM, 2mb cache, ATA/100, 3yr warranty	

NOTE: Above IDE/ATA drives compatible with desktop and tower Macs that support any version of IDE/ATA interface. ATA/133 is backwards compatible with ATA/100, ATA/66, ATA/33, ATA, EIDE, IDE.

## Acard AHARD PCI ATA Card

FAST ATA/66 version \$79.95!

FAST ATA/133 version \$96.95!

For ALL PCI PowerMacs

EASY - Just plug and play!

FAST - Up to 133MB per second throughput

AFFORDABLE - Allows up to 4 of the fastest and cost effective ATA HDs to be connected in you Mac

Internal cabling included. 1yr MFR Warranty. Compatible with Apple OS Versions 8.5 and above, including Apple OS X! For any Apple PowerMac or PowerPC Clone with a PCI Slot! Owners of PowerPCs with only built in SCSI, you now have another option!



## NEW! DDR MEMORY

Double Data Rate RAM for the 2002 Apple PowerMacs

128MB .....	\$CALL
256MB .....	\$CALL
512MB .....	\$CALL



## PC100 CL2 & PC133 CL3 SO-DIMMS

For Apple iBook 300-600MHz, PowerBook G3 FireWire (2000, aka Pismo), PowerBook G4/400MHz - 667MHz Models.



PC100 CL2	PC133 CL3
64MB .....	\$8.99
128MB .....	\$17.99
256MB .....	\$34.95
512MB .....	\$69.95
512MB .....	\$139.95
512MB .....	\$149.95

N/A	N/A
G3 FW ONLY!	G4/400 & G4/500 ONLY!
\$35.99	\$189.95

PowerBook G4/667MHz model requires PC133 memory. All other listed models are compatible with PC100 or PC133 memory.

## PC100 CL2 SDRAM

For PowerMac G3 models 233MHz-450MHz, PowerMac G4 models 350MHz - 500MHz including dual processor (except G4/466 which requires PC133), G4 Cube 400-500MHz, iMac 350MHz-700MHz.



64MB .....	\$9.95
128MB .....	\$19.95
512MB .....	\$79.95**

256MB .....	\$24.95*
256MB .....	\$39.95**

\* For PowerMac G3 models and original G4 'Yikes' PCI models ONLY!  
\*\* For PowerMac G4 AGP / Sawtooth models, G4 Cube, iMac 350-700MHz ONLY  
Also compatible with Intel / AMD based 'Wintel' machines.

## 2.5" ATA/IDE notebook drives



For iBooks, PowerBook G3 & G4 series, PowerBook 150/190/1400/5300, Duo 2300/2400.

10.1GB IBM Travelstar 9.5mm SuperSlim 512k 2yr .....	\$89.99
20.0GB IBM Travelstar 9.5mm SuperSlim 2048k 2yr .....	\$119.99
30.0GB IBM Travelstar 9.5mm SuperSlim 2048k 2yr .....	\$169.99
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MA03-02

## PC100 CL2 SO-DIMMs



PC100 CL2 SO-DIMM upgrades for Apple iMac Rev A-D (233/266/333MHz Models), PowerBook G3 Wallstreet (1998), Lombard (1999).

64MB .....	\$8.99
256MB .....	\$41.95

128MB .....	\$23.99
256MB Low Profile. ....	\$56.95*

\* Allows up to 512MB in above iMac and PB models!

LIFETIME WARRANTY

## PC133 CL3 SDRAM



PC133 CL3 SDRAM for G4 models 466-867MHz including dual processor.

64MB .....	\$9.99
256MB .....	\$39.99

128MB .....	\$19.99
512MB .....	\$79.99

PC133 CL2 HIGH Performance 256MB .....	\$49.99
PC133 CL2 HIGH Performance 512MB .....	\$99.95

## Protect your investment!

OWC's LSPs prevent keyboard marks on your Powerbook screen. The Pod Protector™ keeps your iPod looking like new! Made of top quality, glove-soft leather, they are an elegant and effective means of protecting your Apple products!



LSP for Wallstreet, Lombard, FireWire, TiBook  
**\$14.99**



LSP for ALL iBook models  
**\$14.99**



LSP Full Size for PB G4 ONLY  
**\$17.99**

FREE iKleen Apple Polish screen cleaner for 'Klean Start!'

## The Pod Protector

without belt clip  
**\$27.95**

with belt clip  
**\$29.95**



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## FireWire storage

### Mercury Elite 7200RPM



The Mercury Elite Series features the fastest hard drive mechanisms coupled with the fastest Oxford911 bridge configuration. Tests show the Mercury Elites to be the FASTEST single drive FireWire solution on the planet! Compact in size and built to go the distance, the Elite is great for taking on the road too! — Standard Features Include: Large 2048K Data Buffer; 7200RPM Mechanism Speed; 2 FireWire Ports; US/International switching power supply; Compatible with all Mac OS Versions 8.5.1 and above, including OS X. Also compatible with Win98SE, WinME, Win2000, WinXP; Fully DV Compatible with sustained data transfer speeds of **OVER 35 MEGABYTES PER SECOND!**

All cables and software included. Software not required for 9.1 & above.

40GB **\$219.99** 60GB **\$249.99** 80GB **\$299.99** 100GB **\$349.99** 120GB **\$449.99**

### Mercury FireWire 5400RPM

OWC Mercury Series FireWire Drives, based on the same Oxford 911 as the Mercury Elite, offer an excellent combination of quality, high performance, and reliable storage at a competitive price. — Standard Features Include: 512K to 2048K Buffer; 5400RPM Mechanism Speed; 2 FireWire Ports; US/International switching power supply; Compatible with all Mac OS Versions 8.5.1 and above, including OS X; Also compatible with Win98SE, WinME, Win2000, WinXP; Sustained data rates of over 30MB/s.

All cables and software included. Software not required for 9.1 & above.

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## 2.5" FireWire storage

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20GB ..... **\$219.97**  
 30GB ..... **\$259.97**  
 40GB ..... **\$359.97**  
 60GB **NEW** ..... **\$CALL**

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Now you too can use the thousands of USB and FireWire devices available, without buying a new computer!



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## Get more from your Mac with a G3 and G4 upgrade today!

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**BlueChip LS** lets you upgrade your trusty PowerBook G3 Lombard (1999 model) with the latest G3/G4 Technology! User installable upgrade replaces your PowerBook's processor daughtercard. No trade-in, just upgrade and go!

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**PowerLogix**



**PowerLogix PowerForce** upgrades let you put a fast G3 or G4 Upgrade into your PCI PowerMac! Make your Mac feel like new again! for Apple PowerMac 737/757/6/85/86/95/9600\* models, PowerComputing PowerWave/PowerTower/PowerBase/PowerCenter, SuperMac J700/S900\*. \*G4 Upgrade not compatible with 6 slot machines

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 PowerForce G3/400MHz 1024k ..... **\$149.99**  
 PowerForce G3/500MHz 1024k ..... **\$219.99**  
 PowerForce G4/450MHz 1024k ..... **\$279.99**

EXPERIENCE UP TO 10X THE PERFORMANCE!

### Beige G3 / Blue & White G3 ZIF Upgrades

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# NEW PowerBook G4 Models!

## Now Available with DVD/CD-RW Combo Drive!

### A whole new architecture!

The new PowerBook G4 now features a DVD-ROM/CD-RW Combo drive that lets you edit movies, watch DVDs and burn CDs anywhere you take your PowerBook.

On the inside the new PowerBook G4 has a whole new architecture: faster PowerPC G4 processors, powerful new graphics capabilities, more RAM, and the world's most advanced operating system.

### Revolutionary design!

- 1 inch thin and only 5.3lbs.
- Durable titanium casing
- 15.2" widescreen active-matrix display with 1152 x 768 pixel resolution in millions of colors
- Slot loading DVD-ROM drive or DVD/CD-RW combo drive
- AirPort wireless network card pre-installed on 667MHz. Available for 550MHz

### Super performance!

- Up to 667MHz PowerPC™ G4 processor with Velocity Engine™
- Up to 5 hours of run time
- Up to 512MB of PC100 SDRAM expandable up to 1GB
- Easy expandability through FireWire®, USB and PC Card slot

The new PowerBook G4 has been turbocharged and extensively re-engineered—to deliver a tremendous performance boost!

### PowerBook G4 Accessories

#354864	PowerBook G4 Additional AC Adapter	\$79
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**Price Drop!**  
**Save**  
**\$200**

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**Plus get up to**  
**256MB RAM**  
**FREE!**

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**New!**  
**now with**  
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## The New Titanium PowerBook G4 delivers speeds up to 667MHz!

**AirPort-ready:**  
The PowerBook G4 is ready for wireless networking with two built-in antennas. The 667MHz model has an Apple AirPort card pre-installed!

**15.2" mega-widescreen format:**  
This 15.2" widescreen display with its 1152 x 768-pixel resolution is perfect for laying out your video or graphics projects simultaneously!

**Full-size keys:**  
Built-in keyboard includes 12 function keys and 4 arrow keys.



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**5 hour battery and RADEON graphics:**  
Includes a 55-watt-hour lithium-ion battery providing up to 5 hours of battery life and the ATI Mobility RADEON with unparalleled 2D, 3D and multimedia graphics performance!

**Combo drive:**  
Provides everything you need to watch DVD Video and read and record CDs!

**the Mac**  
Professional's Choice

### Apple AirPort Wireless Networking

- 11 Mb per Second • 150 foot range
  - Up to 50 users
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<b>New PowerBook G4 Models- Now with DVD/CD-RW combo Drive!</b>													
#966303	550	256MB	N/A	256MB	20GB	DVD/CD-RW	Promo <sup>†</sup>	56K	Two/One	Yes	<b>New!</b>	<b>\$2294</b>	\$64/mo~
#966307	667	512MB	N/A	512MB	30GB	DVD/CD-RW	Yes	56K	Two/One	Yes	<b>New!</b>	<b>\$2994</b>	\$84/mo~

**\*Own this Titanium PowerBook G4 550MHz for as low as \$62/month with the New MacMall EZ Payment Plan!** Call for details.

<sup>†</sup>MacMall AirPort card offer is valid only on PowerBook G4 550MHz DVD/CD-RW drive model and requires additional \$30 professional installation fee. Offer expires 2/28/02.

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G3/233 64 Mb/2 Gb/CD/56k/14.1" .....729  
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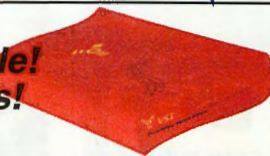
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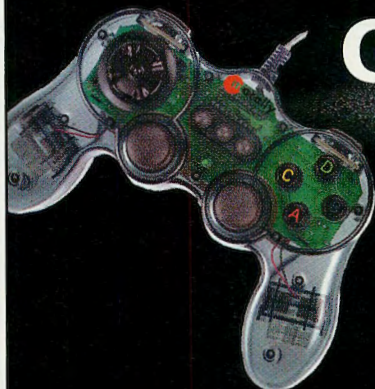


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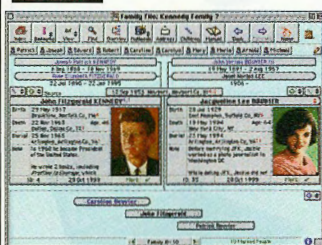
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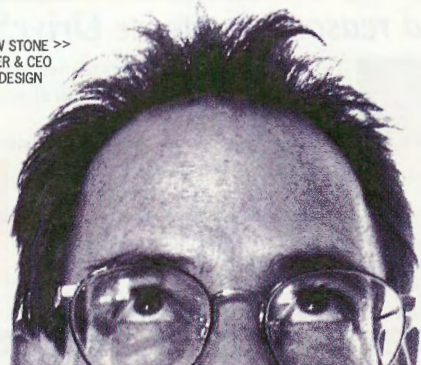
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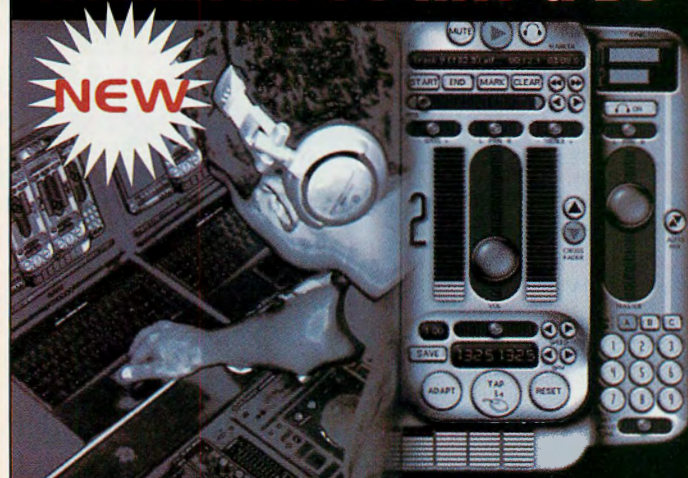
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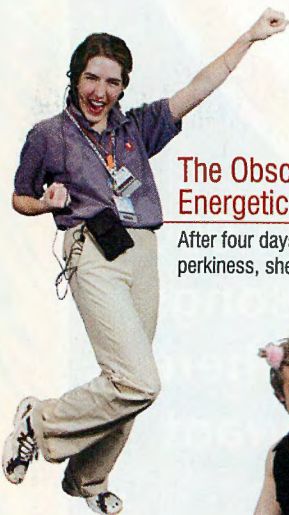


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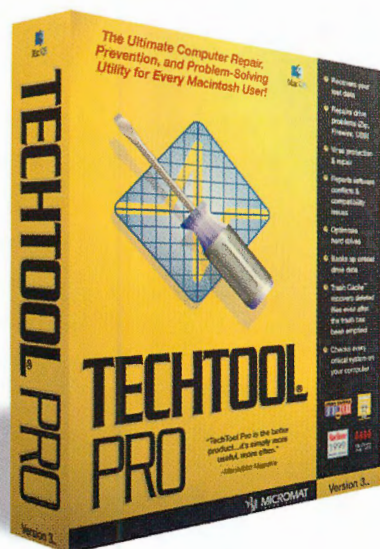
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## In with the newer...



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While Drive 10 is a new product, it is derived from TechTool Pro, Micromat's world-class diagnostic and repair utility. Using TechTool's time-tested routines as well as some new routines developed exclusively for OS X, Drive 10 offers many tools for checking and repairing any drive on your system. Don't entrust your OS X drive to ancient utilities. Protect your data and drive safely with Drive 10.



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